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Maritime Exploration in the Age of Discovery, 1415–1800

Ronald S. Love

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Linda S. Frey and Marsha L. Frey, Series Editors

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This book is dedicated to my three brothers,
David, Gord, and Dan Love.
May their children learn from their fathers'
appreciation of history.

Contents

Series Foreword by Linda S. Frey and Marsha L. Frey ix

Preface xiii

Acknowledgments xvii

Chronology of Events xix

Chapter 1 Historical Overview 1

Chapter 2 Portugal and the Search for a Sea Route to Asia 9

Chapter 3 Spain and the Discovery of a New World 33

Chapter 4 Circumnavigation and the Search for a Northern Passage to China 55

Chapter 5 Exploration of the Great South Sea 85

Epilogue 115

Biographies: Personalities of the Age of Discovery 119

Primary Documents Relating to Maritime Discovery and Exploration 137

Glossary of Selected Terms 167

Annotated Bibliography 171

Index 185

Photographs follow page 84.

Series Foreword

American statesman Adlai Stevenson stated, "We can chart our future clearly and wisely only when we know the path which has led to the present." This series, Greenwood Guides to Historic Events, 1500–1900, is designed to illuminate that path by focusing on events from 1500 to 1900 that have shaped the world. The years 1500 to 1900 include what historians call the early modern period (1500 to 1789, the onset of the French Revolution) and part of the modern period (1789 to 1900).

In 1500, an acceleration of key trends marked the beginnings of an interdependent world and the posing of seminal questions that changed the nature and terms of intellectual debate. The series closes with 1900, the inauguration of the twentieth century. This period witnessed profound economic, social, political, cultural, religious, and military changes. An industrial and technological revolution transformed the modes of production, marked the transition from a rural to an urban economy, and ultimately raised the standard of living. Social classes and distinctions shifted. The emergence of the territorial and later the national state altered man's relations with and view of political authority. The shattering of the religious unity of the Roman Catholic world in Europe marked the rise of a new pluralism. Military revolutions changed the nature of warfare. The books in this series emphasize the complexity and diversity of the human tapestry and include political, economic, social, intellectual, military, and cultural topics. Some of the authors focus on events in U.S. history such as the Salem witchcraft trials, the American Revolution, the abolitionist movement, and the Civil War. Others analyze European topics, such as the Reformation and Counter-Reformation and the French Revolution. Still others bridge cultures and continents by examining the voyages of discovery, the

Atlantic slave trade, and the Age of Imperialism. Some focus on intellectual questions that have shaped the modern world, such as Charles Darwin's *Origin of Species*, or on turning points such as the Age of Romanticism. Others examine defining economic, religious, or legal events or issues such as the building of the railroads, the Second Great Awakening, and abolitionism. Heroes (e.g., Meriwether Lewis and William Clark), scientists (e.g., Darwin), military leaders (e.g., Napoleon Bonaparte), poets (e.g., Lord Byron) stride across the pages. Many of these events were seminal in that they marked profound changes or turning points. The Scientific Revolution, for example, changed the way individuals viewed themselves and their world.

The authors, acknowledged experts in their fields, synthesize key events, set developments within the larger historical context, and, most important, present well-balanced, well-written accounts that integrate the most recent scholarship in the field.

The topics were chosen by an advisory board composed of historians, high school history teachers, and school librarians to support the curriculum and meet student research needs. The volumes are designed to serve as resources for student research and to provide clearly written interpretations of topics central to the secondary school and lower-level undergraduate history curriculum. Each author outlines a basic chronology to guide the reader through often-confusing events and presents a historical overview to set those events within a narrative framework. Three to five topical chapters underscore critical aspects of the event. In the final chapter the author examines the impact and consequences of the event. Biographical sketches furnish background on the lives and contributions of the players who strut across the stage. Ten to fifteen primary documents, ranging from letters to diary entries, song lyrics, proclamations, and posters, cast light on the event, provide material for student essays, and stimulate critical engagement with the sources. Introductions identify the authors of the documents and the main issues. In some cases a glossary of selected terms is provided as a guide to the reader. Each work contains an annotated bibliography of recommended books, articles, CD-ROMs, Internet sites, videos, and films that set the materials within the historical debate.

Reading these works can lead to a more sophisticated understanding of the events and debates that have shaped the modern world and can stimulate a more active engagement with the issues that still affect us. It has been a particularly enriching experience to work closely with such dedicated professionals. We have come to

know and value even more highly the authors in this series and our editors at Greenwood, particularly Kevin Ohe and Michael Hermann. In many cases they have become more than colleagues; they have become friends. To them and to future historians we dedicate this series.

Linda S. Frey
University of Montana

Marsha L. Frey
Kansas State University

PREFACE

> They that go down to the sea in ships, that do business in great waters; these see the works of the Lord, and his wonders in the deep.
>
> —Psalm 107: 23–24

Over the past hundred years, the topic of European exploration and expansion around the globe has attracted extensive historical interest, from its beginnings with the early fifteenth-century Portuguese voyages down the west coast of Africa to the closing years of the eighteenth century on the eve of the Age of Imperialism. During that period of study, the literature has undergone several important transformations. It has evolved from what may be described as the "seeds of empire" school of thought to the current preoccupation with the experience of indigenous peoples (the so-called Other) in relation to Europeans who are depicted largely as aggressors. Starting roughly in 1880 and continuing to 1940, British, French, Dutch, and Portuguese civil servants who administered the overseas possessions of their respective countries wrote in order to glorify past colonial ventures as a means of legitimizing the imperialism of their day. Not surprisingly, their books were Eurocentric, even nationalistic, in spirit, reflecting the political trends and attitudes of that time.

Only since the end of the Second World War, and during the past twenty-five years in particular, has renewed interest in the historical phenomenon of European exploration and expansion produced a more balanced approach—one that acknowledges the intense economic, social, religious, and cultural interaction that developed between Europe and other societies encountered in Asia, the Americas, and the Pacific islands of Oceania. That evolution combined the best elements of the traditional literature with the refinements in method and perspective of post-1945 scholarship. Nevertheless, the research remained

largely immersed in voyages and commerce, a sort of "ships, guns, and ports" focus, emphasizing exploration and discovery over interaction and association that contributed in crucial ways to the emergence of European domination.

Building on that work, however, a new generation of scholars has applied innovative research techniques to modify both the idea of discovery and the Eurocentric "seeds of empire" approach. As a result, the field today is far more multicultural, multilingual, and multifaceted in scope than ever before. The past decade has witnessed still further, and sometimes extreme, revision of the subject sparked by the quincentenary of Columbus's epic voyage in 1992. Rejecting the Eurocentrism of the past, the best of this recent work provides a useful counterpoint to the traditional concentration on the Western perspective by reminding scholars and their readers that there is another point of view. By the same token, much of this work also has resulted in a hostile, anti-European reaction and, at its base, a distorted representation of the contacts between the Western and non-Western worlds of the fifteenth through the eighteenth centuries that is neither historically accurate nor compelling.[1]

Nevertheless, a common theme of this historiographical evolution since the late nineteenth century has been the establishment of the seaborne empires of Portugal, Spain, England, the United Provinces of the Dutch Netherlands, and France. These developed from voyages of exploration that in their turn profoundly changed the way in which ordinary men and women in western Europe viewed the wider world. In 1400, just prior to the first of these maritime expeditions, Europeans had only a vague and often erroneous idea of what lay beyond their shores. Contemporary maps, centered on the holy city of Jerusalem, were more or less accurate in their depiction of coastlines and kingdoms bordering the Mediterranean Sea, which had been well known since ancient times. But what existed outside the *terrae cognitae* of European geographic experience was an unsolved riddle and a matter more of conjecture, speculation, and fantasy than of any concrete fact. That situation changed dramatically over the next two hundred years or more (if one includes Pacific Ocean exploration), as maritime discovery revealed the actual contours of most of the habitable world. As a result, European cartographers corrected their maps and redrew the outlines of the continents that are so familiar today.

As many historians quickly point out, however, in themselves, long-distance voyages over open, uncharted seas and acts of discovery were neither new nor unique to the western European experience. Arab, East Indian, and Chinese navigators, as well as Vikings

and Polynesian islanders, had undertaken remarkable transoceanic journeys long before European mariners sailed in the fifteenth, sixteenth, and seventeenth centuries. But these early accomplishments were rarely repeated or else were forgotten—except, perhaps, as part of folklore. At the same time, few of the voyages had anything beyond localized significance.

All of this changed during the Age of Discovery, when Europeans visited most of the inhabited areas of the globe, or at least those that were accessible by sea, and encountered vast territories formerly unknown to them. In the process, the various regions of the earth were united into a single system of navigation, while European command of the sea paved the way for eventual extension of Western influence into almost every corner of the globe. Certainly, the growth of Europe's geographic knowledge was followed rapidly by the expansion of European trade and territorial control. Maritime exploration also contributed to many other fields of discovery during the same period, starting with the triumph of empirical study—an attitude of "seeing is believing"—over the ancient authority of classical Greek and Roman authors. Thus began the close association of scientific and technological advancement with everyday work that is a unique characteristic of the modern Western world.

Although still convenient for textbooks and examinations, the practice of dividing history into great chapters or "ages," delineated by abrupt or arbitrary limits, has little relation to reality.[2] Continuity and gradual evolution typify the story of the past, while the complexities of human society today were the result of gradual and continuous processes over time, not sudden cataclysmic change. The more one examines these historical processes in detail, the more one recognizes that there are few, if any, abrupt or dramatic transitions in human history.[3] Because the societies of the modern world have centuries-old roots, and national institutions and cultural patterns are more meaningful when viewed from the long perspective of their heritage, it is nearly impossible to pinpoint a transformation with any degree of accuracy.

But to overemphasize that kind of continuity presents dangers of its own, because it underestimates the subtle scheme of human relations, while obscuring irrefutable facts and discernable movements of signal importance. One such movement was the steady expansion of contacts among the many cultures of the habitable world brought about by geographic discovery. In its wake, the center of gravity in politics and economics was displaced steadily away from Asia and the Mediterranean sea; furthermore, the maritime kingdoms of western Europe were elevated to a new level of

significance, not just as a counterpoise to groupings of other cultures around the globe but also as a distinctive segment of humanity with a unique heritage, outlook, and identity in correlation to other societies across the world.[4] Consequently, much of the political, economic, social, and even cultural history of modern times has been concerned with the rivalry among different European states for opportunities to exploit and develop new lands overseas during that period that historians have designated as the great Age of Discovery for good reason. Indeed, none of that competition for territorial empire would have been possible without those pioneering voyages of exploration that interlinked the world's oceans and cultures, and which form the subject of this book.

Notes

1. Glenn J. Ames and Ronald S. Love, eds., *Distant Lands and Diverse Cultures: The French Experience in Asia, 1600–1700* (Westport, CT: Praeger, 2003), xiii–xv.

2. Arthur P. Newton, "The Transition from the Medieval to the Modern Age," in *The Great Age of Discovery*, ed. Arthur P. Newton (New York: Burt Franklin and Lenox Hill, Publishers, 1932), 1.

3. Ibid.

4. Ibid., 4.

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Chronology of Events

1249	Portugal completes its Reconquista against the Muslims.
1291	The Vivaldi brothers depart on a voyage into the Atlantic; they are never heard from again.
1295	Marco Polo returns from his sojourn in China.
1405	The first of Zheng He's seven expeditions leaves China to impose Ming prestige in maritime Asia.
1406	Jacobus Angelus translates Ptolemy's *Geography*.
1410	Pierre d'Ailly writes *Imago Mundi*.
1415	Portuguese forces capture Ceuta.
1419	Prince Henry "the Navigator" of Portugal becomes governor of the Algarve, where he establishes his court at Sagres.
1420	Prince Henry is created Grand Master of the Order of Christ. Portuguese voyages to west Africa begin under Henry's sponsorship. The Portuguese begin to settle Madeira.
1432	The Portuguese rediscover the Azores.
1433	The last voyage of Zheng He sails; China adopts a policy of isolationism thereafter.
1434	Portuguese mariners round Cape Bojador for the first time.
1436	Spain is awarded possession of the Canary Islands by papal decree.

1437	The abortive Portuguese attack on Tangier occurs; Prince Henry participates.
1439	The Portuguese begin to settle the Azores.
1441	The first slave cargoes are brought back to Portugal from west Africa.
1443	The Portuguese land on Arguim Island. Prince Henry is awarded a monopoly of trade and conquest in Africa by the Portuguese Crown.
1445	Portuguese mariners sight Senegal and Cape Verde.
1450	Gomes Eannes de Azurara writes *The Chronicle of the Discovery and Conquest of Guinea*.
1451	Christopher Columbus is born at Genoa.
1453	Constantinople falls to the Ottoman Turks.
1455	The papal bull *Romanus pontifex* is issued, granting Portugal a monopoly of trade and conquest in Africa and credits Prince Henry with seeking an all-sea route to Asia. Portuguese merchants and mariners are prohibited from seizing slaves by force; a policy of peaceful trade with Arab and African merchants is established.
1456	The Cape Verde Islands are sighted; the mouth of the Gambia River is explored.
1457	Portugal's first gold coin, the *cruzado*, is minted from proceeds of the African trade.
1458	The Portuguese expedition to capture Alcácer-Ceguer begins; Prince Henry participates.
1460	Prince Henry dies. Portuguese mariners reach Sierra Leon.
1462	Portuguese mariners enter the Gulf of Guinea.
1469	The Guinea trade monopoly is granted to Fernão Gomes. Isabella of Castile and Ferdinand of Aragon marry.
1474	Isabella succeeds to the Castilian throne; civil war erupts. Paolo Toscanelli proposes to the king of Portugal the possibility of sailing to Asia via the Atlantic.

1475	War breaks out between Portugal and Castile. The first printed edition of Ptolemy's *Geography* appears. Fernão Gomes's trade monopoly in Africa is cancelled.
1479	The Treaty of Alcaçovas-Toledo is signed between Portugal and Castile. Ferdinand ascends the throne of Aragon. Isabella is recognized as the rightful queen of Castile, ending the civil war. Columbus takes up residence in Portugal.
1481	John II becomes king of Portugal.
1482	The castle and factory of São Jorge da Mina are founded on Africa's Gold Coast.
1484	Columbus's "Enterprise of the Indies" is rejected by the king of Portugal.
1486	Columbus proposes his enterprise to the Spanish monarchs; it is rejected four years later.
1487	Bartolomeu Dias departs on his voyage to southern Africa.
1488	Dias returns to Portugal with news of the discovery of the Cape of Good Hope.
1492	The siege of Granada concludes, freeing Isabella and Ferdinand to engage in overseas exploration. Columbus departs on his first trans-Atlantic voyage; he discovers Hispaniola and other islands. The Jews are expelled from Spain.
1493	Columbus returns to Spain and departs on his second voyage, visiting Cuba and Jamaica. The colony of La Isabella is founded on Hispaniola. Papal bulls of demarcation of the globe between Spain and Portugal are issued.
1494	The Treaty of Tordesillas is signed between Spain and Portugal.
1495	Columbus returns from his second voyage.
1496	The settlement of La Isabella is moved and renamed Santo Domingo.

1497 Vasco da Gama departs on his first voyage to India.
John Cabot departs on his north Atlantic voyage, discovering Newfoundland.

1498 Da Gama reaches Calicut in India.
Columbus departs on his third voyage to explore parts of the American mainland.
Cabot departs on a second voyage to the north Atlantic and North America.

1499 Da Gama returns to Portugal.
Afonso de Ojeda and Vincent Yàñez Pinzón sail along the Guiana, Venezuelan, and Brazilian coasts; Amerigo Vespucci is aboard for his first voyage.

1500 Pedro Alvares Cabral departs for India; he sights the east coast of Brazil.
Gaspar Corte-Real embarks on his first north Atlantic voyage.
Rodrigo de Bastidas visits the shores of the Gulf of Darién.

1501 Vespucci departs on his second voyage and explores the east coast of South America.
Gaspar Corte-Real departs on his second north Atlantic voyage.
João Fernandes sails to the north Atlantic and discovers Labrador.

1502 Da Gama departs on his second voyage to India.
Vespucci discovers the Rio de Janeiro.
Columbus departs on his fourth voyage to the Americas.
Juan de la Cosa makes a detailed exploration of the Gulf of Darién region.

1503 Columbus explores the coast of Honduras and Nicaragua.
Da Gama returns to Portugal.

1504 Columbus returns to Spain for the last time.

1505 Francisco de Almeida is appointed viceroy in India.
The Portuguese establish a fortified factory at Soffala in east Africa.
Binot Paulmyer sails into the south Atlantic and discovers Gonneville Land.

1506 Columbus dies.

1507 The first Portuguese landing takes place on Ceylon (Sri Lanka).
Almeida establishes a fortified factory in Mozambique.
Martin Waldseemüller publishes his world map and gives the name "America" to the New World.

1508 Juan Ponce de León explores the island of Puerto Rico.

1509 The Portuguese defeat a Muslim fleet off Diu.
Afonso de Albuquerque is appointed the new Portuguese viceroy in Asia.
Sebastian Cabot departs on his first voyage in search of a Northwest Passage.

1510 Albuquerque captures Goa; it becomes the headquarters of Portugal's Asian empire.

1511 Albuquerque captures Malacca, giving the Portuguese control of the strait.
Pietro Martire publishes the first *Decade* of his history of discovery in the New World.
Ferdinand Magellan participates in a Portuguese expedition to Ternate.

1513 Francisco Serrão establishes a Portuguese outpost on Ternate.
The Portuguese attack on Aden in the Red Sea fails.
Ponce de León lands at Florida for the first time.
Vasco Nuñez Balboa crosses the Isthmus of Panama and sights the great South Sea (the Pacific).
The Portuguese reach south China.

1515 Albuquerque captures Hormuz in the Persian Gulf.
The Portuguese establish a presence on Ceylon.

1516 The Portuguese begin to establish control over the Moluccas, completed in 1519.
Balboa crosses the Isthmus of Panama a second time to explore the Pacific coast.

1517 Magellan leaves Portugal in disgrace and enters Spanish service.

1519	Magellan departs from Spain on his voyage into the Pacific. Hernán Cortés departs from Cuba to begin the conquest of Mexico. Balboa is arrested for treason and executed.
1520	Magellan discovers the strait named for him.
1521	Magellan reaches the Philippines, where he is killed in a local war. Sebastian del Cano reaches Tidore. Cortés besieges and captures Tenochtitlan (Mexico City). Lucas Vázquez de Ayllón explores the coast of the Carolinas. Ponce de León leads a second expedition to Florida.
1522	Del Cano returns to Spain with the survivors of Magellan's expedition.
1523	The Conference of Badajoz fails to settle the Spanish-Portuguese rivalry over the Moluccas.
1524	Giovanni da Verrazano departs on his voyage to explore the east coast of North America for France. Estevão Gomes investigates the Bahamas and the east coast of what is now the United States from Florida to Maine. Cristobal de Olid explores the Yucatan coast toward Darién.
1525	Verrazano returns to France. Garcia Jofre de Loyasa sails from Spain to retrace Magellan's trans-Pacific route.
1526	Sebastian Cabot leaves Spain to search for a nearer route to the Pacific along the South American coast.
1527	Sebastian Cabot explores the Rio de la Plata. Spaniards begin to explore the Pacific coast of Mexico. Alvaro de Savaadra makes the first trans-Pacific crossing to originate in the New World.
1529	The Treaty of Zaragoza is signed between Spain and Portugal. Sebastian Cabot returns to Spain.

1531	Francisco Pizzaro begins the conquest of Peru.
1534	Jacques Cartier makes his first voyage to the St. Lawrence River. The Portuguese acquire Diu.
1535	Cartier makes a second voyage to the St. Lawrence.
1536	Cartier returns to France.
1539	Hernando De Soto departs on his expedition to Florida and the Mississippi. Spanish mariners explore the Gulf of California. Portuguese colonization of Brazil begins.
1541	Cartier embarks on his third voyage to the St. Lawrence.
1542	Ruy López de Villalobos sails to the Philippines from Mexico to explore trade possibilities with China.
1543	The Portuguese visit Japan for the first time.
1547	Gonzalo Fernández de Oviedo publishes *The General and Natural History of the Indies*. Sebastian Cabot returns to England from Spain.
1551	The English Company of Merchant Adventurers is established for the purpose of exploration.
1552	Francisco López de Gomara publishes the *General History of the Indies*.
1553	Sir Hugh Willoughby sails to the north Atlantic in search of a Northeast Passage. Richard Chancellor reaches Russia by sea.
1555	Pietro Martire's *Decades of the Newe World or West Indies* is published in English. Chancellor makes a second voyage to Russia.
1556	Stephen Burrough makes a voyage to the north Atlantic in search of a Northeast Passage.
1557	The Portuguese establish their settlement of Macau in southern China.
1564	López de Legazpi sails from Mexico to settle the Philippines.
1565	The Spaniards discover a return trans-Pacific route to Mexico.

1566	The Dutch Revolt begins against Spain.
1567	Alvaro de Mendaña departs on his expedition into the Pacific and discovers the Solomon Islands.
1568	Mendaña's second Pacific voyage begins; he discovers the Marquesas Islands.
1571	The Manila galleons begin to sail between the Philippines and Acapulco in Mexico.
1576	Sir Humphrey Gilbert publishes *A Discourse of a Discoverie for a New Passage to Cataia*. Martin Frobisher departs on his first voyage in search of a Northwest Passage. Luis Vaz de Camões publishes his epic poem of Portuguese exploration, *The Lusiads*.
1577	Francis Drake leaves England on a voyage to the Pacific. Frobisher begins his second voyage in search of a Northwest Passage.
1578	Frobisher's third voyage begins.
1580	Drake returns to England, having circumnavigated the earth. Arthur Pet and Charles Jackman sail in search of a Northeast Passage. Portugal becomes part of Spain's dominions through dynastic inheritance.
1581	The United Provinces declare their independence from Spain.
1582	Edmund Fenton begins his abortive voyage to the Pacific via the Strait of Magellan.
1583	Sir Humphrey Gilbert sails to Newfoundland.
1585	John Davis begins his first voyage in search of a Northwest Passage via Greenland.
1586	Davis embarks on his second voyage.
1587	Davis departs on his third voyage. Thomas Cavendish sails on his circumnavigation of the globe via the Strait of Magellan.
1588	England defeats the Spanish Armada.

1589	Richard Hakluyt publishes the first volume of his *Principall Navigations*; volume two follows in 1599 and volume three in 1600.
1591	Cavendish sails on his second, unsuccessful voyage to the Pacific.
1593	Richard Hawkins embarks on his abortive voyage to the Strait of Magellan.
1594	William Barents embarks on his first voyage in search of a Northeast Passage.
1595	Barents's second voyage begins.
1596	Barents embarks on his third voyage; he discovers Spitsbergen Island deep within the Arctic Circle.
1600	The English East India Company is founded.
1602	The Dutch East India Company is founded.
1605	Pedro Fernandez de Quiros sails to the Cook Islands and the New Hebrides. Luis Vaez de Torres explores the coast of New Guinea and discovers the Torres Strait. Willem Jansz explores the coasts of New Guinea and discovers the northern coast of Australia.
1607	Henry Hudson makes his first voyage to Greenland, Spitsbergen, and the Barents Sea.
1608	Hudson's second voyage begins.
1610	Hudson embarks on his third voyage in search of a Northwest Passage; he discovers Hudson Bay.
1612	Sir Thomas Button sails in search of Hudson and a Northwest Passage.
1615	Robert Bylot sails in search of a Northwest Passage, following Davis's route.
1616	William Baffin sails in search of a Northwest Passage; he reaches Baffin Island. Dirck Hartog explores part of the west coast of Australia. Jan Le Maire and Willem Schouten sail for the East Indies via the Pacific; they discover Cape Horn and the Strait of Le Maire.

1619	Batavia is founded on Java by the Dutch East India Company. Frederick de Houtman explores part of the west coast of Australia.
1623	Jan Carstenz investigates part of the west coast of Australia.
1627	François Thijssen explores part of the west coast of Australia.
1631	Luke Foxe and Thomas James sail in search of a Northwest Passage; they investigate Hudson Bay in detail.
1636	Anthony van Diemen is appointed governor-general of the Dutch East India Company at Batavia.
1641	The Dutch capture Malacca from the Portuguese.
1642	Abel Tasman circumnavigates New Holland (Australia) and discovers Tasmania and New Zealand.
1644	Tasman begins his second voyage to investigate the northern coast of Australia.
1686	William Dampier crosses the Pacific to the East Indies from the coast of Mexico.
1688	Dampier and his crew are the first Englishmen to visit New Holland (Australia).
1697	Dampier publishes *A New Voyage Round the World.*
1699	Dampier embarks on his second voyage to New Holland.
1708	Dampier sails on his third circumnavigation with Woodes Rogers, a privateer.
1721	Jacob Roggeveen sails for the East Indies via the Strait of Magellan and discovers Easter Island.
1725	Vitus Bering embarks on the First Kamchatka Expedition to the north Pacific; he discovers the strait that divides Asiatic Siberia from Alaska.
1733	Bering begins the second Kamchatka, or Great Northern Expedition, to the north Pacific.
1739	Pierre Bouvet de Lozier sails to the south Atlantic in search of Gonneville Land.

1740 Bering sights Alaska and explores Kodiak Island, the Kenai Peninsula, and the Aleutians on his third voyage.

1756 Charles de Brosses publishes the *History of Navigation to the South Lands*.

1764 John Byron sails to the Pacific.

1765 Alexander Dalrymple publishes *An Account of Discoveries in the South Pacifick Ocean previous to 1764*.

1766 Samuel Wallis sails to the Pacific and discovers Tahiti.
Philip Carteret discovers Pitcairn Island and rediscovers a number of islands found by Spanish explorers.
Louis-Antoine de Bougainville sails into the Pacific.
John Collander publishes the *Terra Australis Cognita*.

1768 James Cook begins his first of three voyages to the Pacific; he visits Tahiti and maps New Zealand and the west coast of Australia.

1769 Alexander Dalrymple publishes his book asserting the existence of the Terra Australis.

1772 Cook sails on his second voyage to the Pacific.

1776 Cook embarks on his third voyage to the Pacific.

1779 Cook is killed by natives on the big island of Hawaii.

1785 Jean de la Pérouse sails to the Pacific; he disappears a year later.

1789 Alejandro Malaspina sails on his four-year voyage to the Pacific northwest, the Philippines, New Zealand, and Australia.

1791 Bruni d'Entrecasteaux sails to the Pacific in search of La Pérouse.
George Vancouver sails for the north Pacific and explores the northwest coast of North America.

CHAPTER 1

HISTORICAL OVERVIEW

Since 1992, it has become fashionable to diminish the achievements and impact of the Age of Exploration by emphasizing that European mariners were not unique in their quest for discovery or pursuit of overseas settlement. The argument is that since ancient times, travel in many of the world's great oceans was an ongoing feature of the human experience. Motivated by the need for new land, the desire for trade, or simple curiosity and a spirit of adventure, people along the shores of almost every continent on earth turned their attention to the saltwaters.

Over several millennia, for example, mariners from the Malay Peninsula of Southeast Asia took to the sea. In the process, they explored and colonized the island chains not only of the East Indies, modern-day New Guinea, and Melanesia, but also Fiji and the Pacific island groups that together comprise Polynesia. Between A.D. 400 and 1300, subsequent generations of the same people, or their near relations from islands already settled, discovered and inhabited the westernmost islands of the Marquesas chain, Easter Island toward the west coast of South America, the Hawaiian archipelago, and New Zealand, crossing thousands of miles of uncharted saltwater in open boats to do so. To this day, the various cultures living in this vast area of the globe are linked by a kinship of language and custom that can be traced ultimately back to Malaysia. Meanwhile, other Malay-Indonesians sailed westward through the Indian Ocean to colonize the distant island of Madagascar off the southeastern coast of Africa. Whether all this expansion was planned deliberately or was merely ad hoc in response to particular conditions is still a matter of conjecture. Yet what these early seafarers accomplished by sailing over tremendous distances without any nautical devices other than their knowledge of currents, constellations, and evidence of land acquired from centuries of experience was nonetheless remarkable.

Equally remarkable was the achievement of those peoples who lived and traded since ancient times around the shores of maritime Asia. Hugging the coasts of east Africa, the Indian subcontinent, and the Far East, mariners and merchants alike learned to use the steady rhythm of the monsoon winds that blow throughout the region with such predictability as to make navigation for sailing vessels relatively safe and trouble free. This ease of movement was rendered easier still by the geographic contours of the region, which flow naturally from west to east, lending maritime Asia a coherence reinforced by the development of an intricate system of seaborne trade, especially following the rise of Islam. Already historical forces, including the migration of peoples, means and routes of travel, and economic exchange via the famous Silk Road since ancient and medieval times, had linked much of Asia, the Middle East, and Africa by land. Just as the teeming Muslim cities of the emergent Arabic empire generated a growing demand for costly goods and commodities, Muslim merchants and geographers recognized that the sea that formed the headwaters of the Persian Gulf near Basra, or of the Red Sea at Suez, offered an unbroken means of travel all the way to China on the Pacific's western rim. Hence, although the Islamic Middle East, Hindu India, and Buddhist far-Asia constituted unique zones of cultural identity, strong geographic and commercial links solidified an invisible, centuries-old sense of unity among all three.

Prior to the entry of European voyagers into Asian waters in 1498, no better illustration of that unity could be found than the seven naval expeditions launched successively between 1405 and 1433 by the third emperor of China's Ming dynasty, which had overthrown Mongol rule in 1368. Commanded by Zheng He, a Muslim court eunuch, their chief objective was to impose Chinese prestige abroad and to extract recognition of China's superiority from other Asian princes by asserting tributary relations over them. In the words of Ma Huan, who chronicled three of the expeditions, Zheng He's instructions were to "go to the various foreign countries in the Western Ocean to read out the imperial commands and to bestow rewards."[1] His enormous fleets, composed of specially built "treasure ships" of huge proportions and scores of smaller craft (most of them larger than the vessels later used by Columbus), visited the major ports of Asia, from Java and Malacca to Mogadishu and Malindi on the eastern coast of Africa. They carried Arabic-speaking Chinese interpreters and luxury items to present as gifts to local rulers, an important element in diplomatic protocol among Asian princes.

Thus diplomacy, not exploration, was the primary purpose of these seven extravaganzas. They were intended to extend Ming

influence in distant lands, demonstrate Chinese might, bring new kingdoms into the ancient tribute system, enhance China's trade, and expand its knowledge of the world. But that world was a *known* world of which the Chinese were already well aware, not an unknown one that had yet to be discovered. Zheng He also followed sea routes that were long established. In the process, the great treasure fleets under his command crossed almost half the earth seven times, widely spreading Ming prestige, when the voyages were halted abruptly in 1433. Imperial attention focused thereafter on internal matters, as subsequent emperors turned away from the sea. Consequently, just as China was poised to become the dominant naval force in maritime Asia from east to west, that beginning was cut short by later Ming rulers who, having failed to grasp the possibilities of sea power, left the realization of that potential to anyone enterprising enough to seize it.

How different were conditions in the Atlantic Ocean, which enjoyed none of Asia's geographic or commercial cohesiveness, and where voyages by seafaring peoples were thus far more haphazard and limited in scope. Although Greek and Phoenician seamen had sailed as far as the Strait of Gibraltar in ancient times, not until Rome spread its power and influence around the shores of the Mediterranean Sea, conquered Gaul, and added Britain to its growing empire did mariners venture into Atlantic waters along the coasts of present-day Spain, France, and England. But these voyages were of limited extent and undertaken for the purposes of fishing, trade, and communication, not exploration. Moreover, with the fall of the Roman Empire in the late fifth century A.D., not only did western Europe lose the cohesiveness imposed hitherto by imperial might and administration, but European society also entered a long period of cultural transformation that accompanied its political breakdown. Economic exhaustion, population decline, and creeping poverty had afflicted the Roman Empire in its last decades of existence, coupled with the process of deurbanization as people fled the cities for the countryside. These conditions had contributed, as well, to the increase in importance and local power of the rural nobility, who began to develop the martial spirit and chivalric ideals that came to characterize them in the late Middle Ages. Because most invading Germanic tribes also adopted Christianity as their faith, the Catholic Church began to play an ever more important role, aided by the growth in power and prestige of the Roman bishop (later pope) as head of the only major institution to survive the wreckage of the empire. In the meantime, but for a brief period during the reign of Emperor Justinian (A.D. 527–565), Constantinople had turned its back on the west in order

to protect its own territorial interests in Asia Minor—a decision strongly influenced by deepening doctrinal divisions between the Catholic Church of Rome and the Orthodox Church of Byzantium.

Thus, as a result of the many problems Rome already faced in its final years, the Germanic tribes that had defeated imperial defenses to seize Italy, Gaul, Britain, Spain, and North Africa did not overthrow it. They merely dealt the death blow to an ailing empire in the west. Yet even during the lowest point of the early medieval period that followed, the so-called Dark Ages of the sixth and seventh centuries when western Europe sank into a state of near barbarism, the geographic integrity of the late empire remained largely intact. The new Germanic chieftains who now ruled the successor barbarian kingdoms established upon the rubble of Rome's former grandeur continued to recognize the authority of the Byzantine emperor in Constantinople, the final vestige of imperial majesty. They also endeavored as best they could to maintain Roman institutions, government structures, culture, and diplomacy, though ultimately their efforts failed. Even the Mediterranean remained open to seaborne trade and a lively commerce, using a money economy.

All this interaction ended in the mid-seventh century, however, with the explosion of Islam in the Middle East and its rapid spread from India to Iberia with the formidable armies and navies of the expanding Arab empire in succeeding decades. Under the Frankish emperor Charlemagne (A.D. 768–814), western Europe once more achieved a measure of internal unity. But much of that unity dissolved after his death because of a decline in royal Frankish leadership and the onset of a fresh series of external assaults by different warrior groups from the north, east, and south. Thus besieged, Europe remained for many years a relatively isolated and self-contained society whose knowledge of what lay beyond its geographic boundaries was more myth and fantasy than fact.

By the mid- to late Middle Ages, however, this situation began to change slowly as some people living along the Atlantic Ocean's eastern shores looked outward once more. The most adventuresome mariners at this time were the Vikings. Initially raiders, these fierce men from the region of modern-day Scandinavia plied the water in open, shallow-draft ships, penetrating Europe's many river systems and attacking settlements along every coast. They also discovered and settled, whether by accident or design, island after island in the North Atlantic. From Iceland, which they reached in A.D. 770, they sailed to Greenland in 982 and sighted North America in 986. Not until fifteen years later did they attempt to plant settlers at modern-day L'Anse aux Meadows on the island of Newfoundland, known to the Vikings as Markland or Vineland. With the onset of a

colder climate after 1200, however, the Greenland colonies declined, while the settlement in North America was abandoned when fighting broke out with the local native population. Within a few years, the only memory of Vineland was preserved in the Norse sagas.

Farther south, there is evidence from Muslim sources not long afterward of attempts by Mansa Muhammad, ruler of the west African empire of Mali, to venture into the Atlantic. In the late thirteenth or early fourteenth century, he launched a fleet of four hundred small craft with men, supplies, and stern instructions not to return until it had reached the far side of the ocean or had exhausted its food and water. When a single vessel limped back to report that the rest of the expedition had been lost at sea, undaunted by this grim news Muhammad himself sailed with a second, even larger fleet that disappeared without trace. Had he succeeded in reaching the Caribbean, however, the African ruler would have found the future West Indies already inhabited by the Arawak people, originally Amerindians from South America who had colonized the major island chains of the Greater and Lesser Antilles, going as far north as the Bahamas. Their route was later followed by the Carib Indians, who eventually overran the earlier Arawak settlements, undertook voyages to the North American mainland, and lent their name to the entire region.

It was also around this time that western Europe began to shake off its former lethargy and to look outward once again, although its single major attempt to expand beyond its frontiers after centuries of social upheaval, political turmoil, and external attack—that is, the Crusades to free the Holy Land from Muslim rule—had largely failed by 1277. Even so, contact with the outside world was not completely lost, for the Mediterranean had been reopened to European movement. Hence, the goods of Asia and Africa first encountered by crusading armies still made their way to medieval courts via new networks of trade; the books of Muslim scholars were studied in medieval universities; and Europeans ventured fairly far afield throughout the Near and Far East during the thirteenth and early fourteenth centuries, when the great Mongol Empire provided security and stability from China's Pacific coast to Europe's eastern boundaries. The Venetian Marco Polo is only the most famous of many travelers of this era. Nevertheless, western contact with non-Western societies remained limited until European seafarers undertook their initial voyages of exploration in the early 1400s.

In any case, by 1450 when Portuguese exploration of the west coast of Africa was still in its infancy, much had been accomplished. Not only had most of the islands of the Atlantic, Pacific, and Indian Oceans been discovered and settled, but also seaborne trading patterns had developed in many areas of the globe, especially in

maritime Asia where the intricate commercial system united peoples across the region. Commerce similarly linked native societies throughout the Americas, though on a much smaller scale, while seafarers routinely traded among island groups in the central and western Pacific over well-established routes. On the other hand, no one had yet crossed the Pacific from either direction. Because of the wide Atlantic barrier, the civilizations of what later became known as the Old World in Europe and the New in the Americas also remained ignorant of each other's existence. As a result, contact between peoples of both hemispheres and Oceania was sporadic at best, where contact existed at all.

By 1500 this situation had begun to change dramatically. Still imbued with the old crusading spirit and eager to find a direct sea route to Asian markets that would bypass the Muslim and Italian middlemen who dominated the Mediterranean trade, Portuguese mariners sponsored by the Crown found their way around the African continent to the Indian Ocean and the rich ports of the East that lay beyond. Meanwhile, Spanish explorers or those employed by Spain, also hoping to reach the fabled Orient, crossed the Atlantic to discover the Americas instead. From these beginnings followed the establishment of new sea lanes that eventually linked the lands and societies of the Indian, Atlantic, and Pacific Oceans. These new networks fostered direct contact between the Western and non-Western worlds, which intensified commercial and cross-cultural interaction between them over time. They also promoted sustained and more systematic encounters with peoples on a far grander geographic scale than ever before. In short, the early Portuguese and Spanish voyages of discovery, followed by those of England, France, and the United Provinces (or Dutch Netherlands), increased worldwide interaction and inaugurated a genuinely global economy in which seaborne goods from almost every corner of the earth reached markets in distant lands.

This sudden burst of maritime activity was produced by a combination of coincidences and events. To begin with, Europe after 1300 was no longer the narrow, inward-looking world of earlier times. The restoration of trade in the Mediterranean, the growing taste for the spices and luxury goods of Asia, and the written accounts of Polo and his fellow travelers contributed to a growing interest in distant lands. Meanwhile, the collapse of the Mongol Empire in the late fourteenth century, followed by the conquest of Constantinople by the Ottoman Turks in 1453, resulted not just in political instability and insecurity of travel that threatened to cut overland contacts with Asia. It led as well to rising prices and increased costs of trade with Muslim merchants of the Middle East,

who dictated the terms of commerce and transacted business only with Italian middlemen from the city-states of Renaissance Venice and Genoa. At the same time, the Muslim victory over Byzantium intensified the old hostility between Christendom and Islam, which rekindled the crusading spirit in the minds of many Europeans. All these conditions provided more incentives to seek new routes to the sources of silk and spices in Asia, where new allies against Islam might be found, as well.

What appeared to be unrelated events also combined at this time to enable voyages of exploration. The recovery of ancient Greek and Latin texts on geography, mathematics, and astronomy—lost since the fall of Rome—provided important new sources of knowledge vital to the science of navigation. Advances in shipbuilding and design similarly helped, such as the development of the caravel in Portugal and Spain. This sturdy, seaworthy vessel, capable of sailing well both before and into the wind and of carrying large cargoes, was better suited for long voyages across dangerous seas out of sight of land for weeks at a time than any other ships of the day. Western Europe thus had the means, the motive, and the opportunity to open new routes to the fabulous east and to discover new continents to the west by the beginning of the fifteenth century.

Europe's maritime exploration from 1415 to 1800 is of special interest, therefore, because it began a revolution that profoundly altered the course of world history and in many ways determined it. Certainly, note numerous scholars, Europeans benefited most from this effort, trading profitably around the globe, claiming or conquering vast territories in the New World, and founding colonies from Virginia to Botany Bay. In the process, their lifestyles changed as their tastes became more cosmopolitan. Thus by the mid-eighteenth century, writes modern historian John E. Wills Jr., Europe had become a consumer society of sugar, tea, coffee, porcelain, and textiles (e.g., silk, muslins, calicoes, and chintzes), whose centers of production were in Asia and the Americas. To illustrate the conspicuous nature of that consumption, he playfully describes a fictitious London merchant on a fine summer morning in 1730, who

> flings back the chintz quilt, very old-fashioned but a beloved family heirloom, straightens his muslin night-shirt and puts on his Chinese silk dressing-gown as the maid enters with the tea, milk and sugar. She trips, and the newly bought matched blue and white china tea service is smashed. There will be a row. It will be worse because his wife has been in a bad mood ever since she learned that her country cousins can buy from peddlers patterns of calico and chintz not yet seen in London, and finer teas. It is a relief to think that he must meet a promising new customer at

> Garraway's coffee house this afternoon, and that with any luck the meeting will go on later into the evening.[2]

At the same time, European influence in world affairs increased steadily after 1500. But not until the nineteenth century, when industrialization, powerful weaponry, and more efficient means of transportation and communication enabled the West to assert its political and economic might around the globe, would it dominate international relations. To be sure, the Portuguese, Spaniards, English, French, and Dutch established large commercial empires in the Indian Ocean basin and founded colonies in the Americas. But in Africa, India, Southeast Asia, and China they traded solely with the indulgence of local authorities and exercised little influence beyond the coastline. Clearly, Europeans posed no threat to the powerful, land-based states of the Middle or Far East, and they knew it. Only at sea did they predominate, having all the advantages of greater navigational skill and superior naval technology.

Nevertheless, Europeans played a far more prominent role in global affairs between 1500 and 1800 than their forebears had, closing a long epoch during which the trend of historical influences had moved predominantly from east to west. Since ancient and medieval times, most expansion by land or water had come from Asia. It was there, after all, that the most advanced technologies, many of the most dynamic systems of belief, the mightiest states, and the richest networks of trade could be found. Hence, little did anyone recognize at the time that when the Portuguese and Spaniards launched their first voyages of exploration in the fifteenth century, they began a new era that not only led to the gradual creation of an increasingly interdependent world but also opened the way to the growth of Western hegemony that culminated with the subsequent Age of Imperialism, when Europe became the global center of power, wealth, and technological innovation. It was tiny Portugal, however, that pioneered the transformation of European relations with the rest of the world in a way that changed the course of history.

Notes

1. Ma Huan, *Ying-yai Sheng-lan: The Overall Survey of the Ocean's Shores, 1433*, J. V. G. Mills, trans. and ed. (London: Hakluyt Society, 1970; reprint, Bangkok: White Lotus Press, 1993), 69.

2. John E. Wills Jr., "European Consumption and Asian Production in the Seventeenth and Eighteenth Centuries," in John Brewer and Roy Porter, eds., *Consumption and the World of Goods* (London: Routledge, 1993), 133.

CHAPTER 2

PORTUGAL AND THE SEARCH FOR A SEA ROUTE TO ASIA

In late 1498 or early 1499, Christopher Columbus wrote to his royal sponsors, Isabella and Ferdinand of Spain, from the island of Hispaniola (modern Haiti). His purpose was to describe the results of his third voyage to the New World. In that letter, he admired the rival Portuguese for their exploration of the west African coastline to date, noting their firm resolve and crusading spirit despite the high financial and human costs. In particular, he praised the kings of Portugal for having had the courage

> to penetrate to Guinea and for the discovery of that land, and who have spent gold and people to such an extent that, if the whole population of the realm were numbered, it would be found that as many more as the half have died in Guinea, and still they persevered until there came to them from it that which is known, and this they began long ago and there is very little which brings them revenue. They have also dared to make conquests in Africa and to maintain their undertaking at Ceuta, Tangier, Aveilla and Alcazar, and continually to give battle to the Moors [Muslims], and all this at great expense, only to do something princely, for the service of God and for the increase of His dominion.[1]

Clearly, Columbus's intention was to kindle in the Spanish monarchs the same degree of enthusiasm and support for voyages of exploration, especially his own. Little could he have known, however, that at the very moment he was writing to Ferdinand and Isabella, the Portuguese captain Vasco da Gama had already rounded the Cape of Good Hope to reach Asia and its riches.

The first real attempts at exploration actually began in the late thirteenth century, when some southern Europeans ventured into the

Atlantic Ocean, using the same maritime techniques they had acquired from many years' experience of seafaring in the Mediterranean. In 1291, two Genoese brothers named Vivaldi set out from their home port in northwest Italy with the apparent intention of sailing around Africa to reach India. Their ships disappeared without trace, their fate unknown. Undaunted by that loss, during the fourteenth and early fifteenth centuries other Genoese, Portuguese, Flemish, and Spanish mariners sailed frequently into Atlantic waters, thus continuing what the late Vivaldi brothers had started, whether consciously or not. As a result, in rapid succession the islands of the Madeiras, the Azores, and the Canaries were discovered, conquered from their original inhabitants (where there were any), and colonized by the year 1439. Two of these island groups, the Azores and the Canaries, even became outposts for future exploration of the Atlantic, including the voyages of Columbus. Although limited in range and success, these early ventures indicate that the idea—however ill formed—of finding a viable sea route around the African continent to Asia had begun to evolve in the European imagination.

It was the Portuguese who slowly gave that idea clearer definition. A tiny, impoverished country located on the western fringe of Europe and with a lengthy Atlantic coastline, Portugal was landlocked by a high mountain range along its eastern boundary that divided it from Spain. Hence, any desire to increase its territory in that direction was out of the question. Yet expansion was necessary, for with little arable land of its own Portugal needed better agricultural opportunities to feed its small but growing population. It also wanted the financial benefits of trade. Already the kingdom had turned toward the Atlantic to satisfy both needs. Fishing had supplemented its meager food supplies for many generations, while London, Bordeaux, Antwerp, and other major coastal cities of northern Europe had become regular ports of call for Portuguese ships trading in salt, olive oil, cork, grain, hides, and fish. Both the sea and seafaring were therefore vital to the country's economic welfare.

But like other European states of the day that sought access to the spices, luxury goods, and gold that reached North Africa and the Middle East through trade, Portugal faced the challenge of Islam. That challenge, however, was not direct; for unlike its Spanish neighbor, whose long struggle to expel the Muslims from the Iberian Peninsula would not end until 1492 with the conquest of Granada, Portugal had completed its Reconquista by 1249. Furthermore, because the kingdom faced the Atlantic, it was isolated from any immediate threat posed by the emerging power of the Ottoman Empire in the eastern Mediterranean. Yet the Portuguese were barred

increasingly from trade with the Middle East not just by Muslim merchants who controlled the markets from Alexandria to Constantinople but also by the naval force and expertise of fellow Christian, Italian middlemen. They alone transacted business in these ports and hence dominated much of the shipping trade in eastern goods to the rest of Europe and the wealth that trade produced. Muslims similarly controlled the lucrative caravan routes through Central Asia, northern India, and the Arabian peninsula, as well as those that crossed the great Sahara to the port cities of North Africa, along which these goods moved.

The sources of spices, fine textiles, and gold were certainly known to late medieval Europeans, however vague or incomplete their understanding of world geography was at this time. Silk came from China, Marco Polo's Cathay—a land of fabulous wealth, enlightened government, and teeming population. Pepper (so-called grains of paradise) and cinnamon came from India, along with gemstones and excellent cotton cloth. Gold, ivory, and slaves came through the Sahara from the west African kingdoms of the Niger River delta. If the goal, then, was to obtain access to these goods in greater abundance and at cheaper prices, then the means to that goal was to find a direct route to the sources of these goods, in order to bypass the Muslim and Italian merchants who controlled commerce on land and in the Mediterranean. This search was propelled still further by enduring hostility between Christianity and Islam, and the hope of forming an alliance with Prester John, a legendary Christian ruler located somewhere in the east, who (it was believed) could strike the Turks unexpectedly in the flank.

Portugal and Coastal Africa: The Dawn of Discovery

Key to success in both cases—the search for wealth and for Christian allies against Islam—was the sea, and Portugal with its long maritime history was first to grasp that fact. But the decision to invest significant resources in voyages of exploration that were dangerous, costly, and promised uncertain rewards evolved slowly. The kingdom's goals, built upon its close familiarity with Atlantic waters gained from centuries of deep-sea fishing and its lengthy tradition of anti-Muslim warfare, were far more modest in scope. The Portuguese strove not to discover new lands or even a viable sea route to Asia; that would come in due course. They aimed instead to launch a new crusade against the Muslim Berbers of North Africa, who happened also to monopolize commercial contacts with the gold-producing

kingdoms of the Niger Delta via the Sahara. The object, in other words, was to break that monopoly by seizing control of the North African coast, and to outflank the Muslims' caravan trade on land at the same time by establishing direct seaborne relations with west African rulers. Commerce and the crusading spirit motivated Portugal's early maritime expansion in the name of God and of profit.

The Muslims themselves provided the opportunity. When the government of Morocco in northwestern Africa showed signs of weakness in the early fifteenth century, the Portuguese attacked. They began by seizing the stronghold of Ceuta in 1415. This capture ended Muslim control over the sea lanes of the western Mediterranean. There followed the conquest of several more ports along Morocco's Atlantic coast, where Portuguese soldiers saw firsthand (and quickly plundered) the riches acquired by Muslim merchants from trade. Hampered, however, by few resources, limited manpower, and an enemy who remained strong despite successive losses, the Portuguese were unable to penetrate farther inland to gain immediate access to the trade in gold and slaves. Nevertheless, the campaign provided them with better information about the caravan routes that brought these commodities from the African states south of the Sahara.

Any attempt to reach those states by sea had to be organized into a sustained and systematic effort if it were to succeed. It also required royal sponsorship in the form of ships, men, and money under effective leadership. The task thus fell to Prince Henry (1394–1460), third son of the Portuguese monarch John I (r. 1385–1433) and a veteran of the Ceuta campaign, whose noble spirit (wrote the court chronicler Gomes Eannes de Azurara in 1450) "by a sort of natural constraint, was ever urging him both to begin and to carry out very great deeds."[2] Because he devoted the remainder of his life to patronizing mariners and promoting their voyages of exploration down the coast of Africa into the south Atlantic, he is known to history as Henry "the Navigator." Otherwise, his personal experience of the sea was limited to three naval expeditions against Muslim strongholds: Ceuta in 1415, Tangier in 1437, and Alcécer-Ceguer in 1458 when he was sixty-four years old.

Yet, despite the pivotal role he played in launching the early voyages of exploration, and for which he is rightly regarded as father of the great Age of Discovery when Europe took its first tentative steps toward global dominion that ultimately produced the interdependent world of modern times, Henry was a thoroughly medieval man. His perspective on the world was shaped by chivalric ideals and the anti-Muslim crusading spirit. These two traditions

combined formally in 1420 when, at age twenty-six, the prince was appointed Grand Master of the Order of Christ. This chivalric society, sponsored by the pope, required Henry to lead the chaste and ascetic life of a crusader. But although the order's chief purpose was the conversion of pagans to Christianity, symbolized by the red cross imprinted on ships' sails and soldiers' shields, the funds made available to him as Grand Master largely financed his great enterprise of discovery.

The search for converts and Christian allies in the long struggle against Islam was not, however, Henry's sole motive for exploration. He also hoped to make new discoveries that would prove profitable to the Portuguese Crown. The prince, reported Azurara and other contemporaries, had "a wish to know the land that lay beyond the isles of the Canaries and the Cape called Bojador [see below], for up to his time, neither by writings nor by the memory of men, was known with any certainty" what lay in the regions farther south.[3] Seeing also "that no other prince took any pains in [resolving] this matter, he sent out his own ships against those parts, to have manifest certainty of them all."[4] More than anything else, Henry was eager to reach the so-called River of Gold—a reference, perhaps, to the Senegal River along Africa's Guinea coast, or even to the region of the Niger Delta farther south and east, about which he had probably learned from the Moors at Ceuta. Hence, his early explorations were directed toward that result. Only later did Portuguese mariners and their royal sponsors make finding a sea route to India around the African continent an explicit goal. Henry's interest in exploration thus derived from a narrower focus and a mixture of motives that included religion, profit, and simple curiosity.

Moreover, that interest developed early in the prince who, as the appointed governor of Ceuta following its capture, always had ships at his command for the city's defense. By 1418, he had begun to sponsor voyages on a small scale. In that year, two of his captains "rediscovered" the Madeira Islands, which Genoese sailors had found the previous century. Henry immediately ordered their colonization. These islands not only served as a strategic base for future exploration but also contributed significantly to the Portuguese economy after sugar production was introduced from Sicily in midcentury. The following year, 1419, Henry returned to Lisbon and his father's royal court where, in reward for recent services, he was granted various honors. Among these was the governorship of the Algarve, Portugal's southernmost province.

There, on the rocky promontory of Sagres at the tip of Cape St. Vincent, Henry established a minor court of his own. In time his

household became an improvised center for navigation that brought together seamen, cartographers, astronomers, shipwrights, and instrument makers—the men who would help him realize Portugal's overseas ambitions. At Sagres, the prince and his staff gathered whatever information they could on the Muslims' trans-Saharan trade, much of it from Italian and especially Genoese merchants who had learned some of its secrets. Also collected and studied were maps and sea charts of remarkable accuracy, many of which had been crafted in the fourteenth century and earlier by skillful Jewish cartographers. Though barely tolerated by Christians or Muslims and subject to periodic persecution from both religious groups, Jewish merchants and scholars moved with relative freedom between the two dominant societies of the Mediterranean world, owing to their importance in the commerce of goods and of learning. Added to these sources of knowledge was new information accumulated over time from the experience of mariners, other travelers, and captives purposely seized from local populations for questioning about the regions from which they came. Those firsthand accounts of people, places, and routes expanded Portugal's geographic horizons.

In 1420 from the nearby port of Lagos, Prince Henry began to dispatch maritime expeditions to discover more of Morocco's Atlantic coast. Hugging the shore and never venturing far from land in uncharted waters, successive voyages pushed steadily southward. But headway was slow, owing partly to conditions of sea travel in the age of sail, partly to the lack of accurate geographic knowledge, but partly also to the superstitions of Portuguese crews. They feared, for example, that the south Atlantic was an unnavigable "Green Sea of Darkness," as Arab geographers had called it. They had heard tales that its waters were boiling hot and were subject, moreover, to strong currents that would prevent any vessel that entered from returning home. It is more than likely, however, that these myths were spread on purpose by Moroccan and Arab traders familiar with the area in order to deter the Christians from intervening in a region long served by the Muslims' trans-Saharan caravan routes. Thus, hand in hand with the early conquest of the seas also went the conquest of superstition. At all events, it took fourteen years for Henry's captains to sail beyond southern Morocco to Cape Bojador—the Bulging Cape—which was finally rounded in 1434.

Overcoming this geographic obstacle was a singular achievement, though some modern historians now assert on the basis of existing evidence that Cape Juby, 140 miles north of Cape Bojador, was the actual site.[5] Whatever the case, because this headland was the southernmost known limit of the west African coastline,

Portuguese sailors had trembled to sail beyond it. Nor were their fears necessarily unfounded. The strong Canary Current, for instance, made sailing very hazardous in the channel next to Cape Juby—itself fringed by reefs—because of that current's tendency to flow obliquely against the main shore rather than parallel to it. The likely result was shipwreck for any captain who failed to remain vigilant in these waters. The frequency of fog, the violence of the waves, and the presence of shallows on Cape Bojador's northern side were likewise obstacles to navigation. In addition, the closer sailors approached the equator, the lower the north star appeared on the horizon until it vanished altogether. Yet knowing the position of that star in the night skies and its relation to other constellations was key to navigation. Hence, conquering Cape Bojador (or Juby), where the north star was already in descent and eight hundred more miles of desert stretched farther south on shore, meant overcoming a significant physical and psychological hurdle that had impeded Prince Henry's program of exploration.

Shortly after this triumph, however, the Portuguese experienced a number of setbacks. Their attempt to seize the nearby Canary Islands, ongoing since the 1420s, finally ended in failure when the pope confirmed Spain's rival claim in 1436. The same year, an expedition returning from coastal Africa south of Cape Bojador announced the discovery of a very large river estuary. This, they had presumed, was the legendary River of Gold (Rio de Oro), which Henry had been so eager to locate. But it turned out to be nothing more than a large bay that thrust thirty miles inland and was divided from the Atlantic by a long peninsula. The Portuguese had much better luck at the end of the decade, when mariners under the prince's sponsorship located and began to colonize (in 1439) the Azores, a group of islands a third of the way across the Atlantic. Significantly, these expeditions to the west represented Europe's first recorded long-distance voyages out of sight of land.

During the last twenty years of Henry's life, his program of exploration progressed rapidly, as new discoveries were made and commercial relations were established with local populations. The prince's immediate goal was always to find an African gold supply to enrich the Portuguese Crown, strengthen the kingdom's revenues, and make the voyages of exploration pay for themselves. Part of that goal was achieved in 1441 when an expedition returning from a point south of Cape Blanco along the Guinea coast brought back a number of black African slaves. They were presented to Henry, along with a small quantity of gold, in return for his freeing of several Muslim captives.

This event heralded Portugal's formal entry into the African slave trade, until then dominated by Muslim Arabs. That trade became sufficiently extensive by 1448 for the prince to order construction of a fort and warehouses on the recently discovered island of Arguim, now part of the Islamic Republic of Mauritania. At this coastal site, Portuguese merchants dealt with Arab dealers who came "to trade for merchandise of various kinds, ... and above all, corn, for they are always short of food ... in exchange [for] slaves whom the Arabs bring from the land of the Blacks, and gold *tiber* [dust]."[6] Arguim was the first European trading post established overseas. It was also the first of many such depots, called "factories" (*feitoria*), subsequently built along the shores of sub-Saharan Africa, the most famous of which is São Jorge de Mina (est. 1482) in modern Ghana. Estimates are that by the turn of the sixteenth century, as many as 150,000 black slaves had been exported to Lisbon. They were exchanged for wheat, textiles, metalwork, horses, leather, and glass beads with Muslim merchants or local chieftains, who acquired their fellow natives for sale as human cargo from raids on villages of the interior. Over the next 250 years, more slaves would follow in the tens of thousands as other European countries entered the lucrative commerce in human flesh.

Though clearly important, Portugal's entry into the slave trade was not the only significant development of the early 1440s. Another was Henry's success in securing three edicts that gave him complete authority over all voyages down the west African shoreline. The first, issued by the pope in December 1442, granted a general indulgence to the knights and friars of the Order of Christ, as well as to other Christians who joined the crusade against the Muslims. It mattered little whether or not the prince personally led these men. As far as the papacy was concerned, Portuguese activities along the Moroccan and Guinea coasts under Henry's command were simply a continuation of Christendom's struggle against Islam in a different locale. The second, and perhaps more important edict, issued by the Portuguese Crown in October 1443, awarded the prince a personal monopoly over all navigation south of Cape Bojador, whether for commercial or military purposes. That grant was later reconfirmed and its terms expanded by a subsequent decree of Henry's nephew, King Afonso V (r. 1438–1481), published in 1449. Essentially, these three documents established Portugal's maritime expansion as an exclusive state enterprise, organized and financed by the Crown with papal approval.

Meanwhile, Henry's expeditions into the south Atlantic continued to make progress. By 1444 or 1445 his mariners had reached the mouth of the Senegal River, which they partially explored. In

addition, they had rounded Cape Verde (Green Cape, so-called because of its abundant vegetation) and discovered the island group named for that promontory located not far from the African mainland. This whole region marked the threshold of the well-watered and more densely populated territories south of the Sahara. It also represented the geographic boundary between the Berber and Arab tribes of the desert and black Africa proper. The differences between these two areas impressed contemporary chroniclers, one of whom marveled that south of the Senegal river, "all men are very black, tall and big, their bodies well formed; and the whole country green, full of trees, and fertile; while on [the Arab] side, the men are brownish, small, lean, ill-nourished, and small in stature: the country sterile and arid."[7] Within a year or two of these discoveries, the Gambia River was also sighted and later explored. Very quickly, additional factories established along the Guinea coast for the purpose of trade were exporting gold, slaves, and other goods (ostrich eggs, musk, sweet resins, oryx skins, etc.) back to Lisbon.

This commercial activity was a departure from earlier Portuguese actions, which, in addition to exploration, had included sporadic assaults against Muslim villages along the Moroccan coast or quick shallow raids into the Sahara's hinterland. The reasons for this strategic change are not difficult to ascertain. To begin with, Portuguese merchants who partly funded Henry's expeditions were more interested in opening normal trade relations with communities along Africa's Atlantic shores than in attacking them. Certainly, slaves or other commodities were procured more easily and cheaply through barter with Muslim and black African dealers than through force of arms. In addition, making war on the people of the sparsely populated deserts of coastal Morocco was far less risky than fighting the much more numerous inhabitants of Guinea, who were very capable of repulsing the small forces that the Portuguese were able to put ashore. Trade was also seen as an alternative means, realistic or not, to extend Portugal's influence in Muslim lands and to convert the local people to Christianity in accordance with the crusading mission against Islam and Henry's official duties as Grand Master of the Order of Christ.

Hence, in 1448 the prince issued instructions that prohibited all further military actions against any part of Guinea. In future, arms were to be used solely for self-defense. The policy of peaceful trading was reaffirmed in 1455, when additional instructions restricted Portuguese mariners to purchasing slaves from Arab and native merchants, rather than seizing them by force. Very soon, however, the trade in gold surpassed that in human beings, as contact

was established with the commercial networks that linked west Africa with the flourishing caravan trade across the Sahara. In fact, by 1457, enough of the precious metal was being exported from Africa to Lisbon for the Portuguese Crown to mint its first gold coin. (Hitherto, only copper currency like the *ceuti*, which commemorated the capture of Ceuta, had been used because of the kingdom's poverty.) Called the *cruzado* (crusade), the new coin was further evidence of the intricate connection between the religious and secular motives that had inspired the early voyages of exploration.

Otherwise, the 1450s were largely undistinguished by important new discoveries, as Henry's focus now turned away from new explorations in favor of developing trade relations with regions already contacted. Consequently, the last major voyages undertaken with his support occurred just shortly before his death in 1460. In 1458, an expedition sailed beyond Cape Verde, the westernmost point of Africa. This voyage was followed by a second expedition two years later that traveled as far as the coast of Sierra Leone, named after the roaring sound of the thunderstorms encountered there and the "lionlike" appearance of its mountains. Shortly afterward, Cape Palmas on the coast of modern-day Liberia was reached, making it the farthest point south that Portuguese seafarers explored during Henry's lifetime.

Yet because of their significance for the future of Portugal's overseas empire, more noteworthy than these final maritime achievements of the prince's career were the contents of three new papal bulls issued in 1452, 1455, and 1456, respectively. Taken together, they constituted what historians generally regard as the "charter of Portuguese imperialism." Under the terms of the decrees, the Crown of Portugal was granted an exclusive monopoly of navigation, trade, and fishing not just in the large seaborne domain its subjects had already explored and subdued, but also in regions they might conquer in years to come, even as far as the East Indies. That monopoly included the pope's general permission to attack Muslims and pagans, reduce their persons to perpetual slavery, seize their goods and territories—all in the name of Jesus Christ—or to trade with them if that were more expedient. Portuguese monarchs were similarly authorized to build churches and monasteries, provide them with priests to administer the sacraments, and exercise spiritual jurisdiction over all regions they presently controlled or might control in future, from the coasts of west Africa to India. Every other European nation was strictly prohibited, meanwhile, from infringing upon, or interfering in any way with, Portugal's monopoly of discovery, trade, and conquest.[8]

A final feature of the three bulls was their recognition of Prince Henry's pivotal role in the work of exploration and expansion since 1419. The pope praised him as a zealous soldier of Christ and defender of the faith who had taken Christianity into unknown regions, there to convince Muslims and heathens alike to accept the religion as their own. He was likewise commended for the colonization of the Madeiras and Azores Islands, and for his tireless sponsorship of expeditions southward to explore the Guinea coast. The papal bull of 1455 was also the first document to credit the prince explicitly with the intention of circumnavigating Africa in search of a direct sea route to India. But Henry did not live long to enjoy this high praise. Furthermore, at his death in 1460 he was barely able to pay his debts. It is one of history's great ironies that despite the many revenues he collected from a wide variety of sources (including the Order of Christ, monopolies on soap production and fishing, and the concession of all trade along the west African coast), that money barely met the heavy costs of maintaining a large household of retainers or of paying for the voyages of exploration. Both expenditures were enormous.

The Gateway to India and Maritime Empire

How Portugal's enterprise of discovery and development of trade were handled during the remainder of the 1460s is unclear. At the end of the decade, however, King Afonso V resumed his late uncle's work by engaging a rich Lisbon merchant named Fernão Gomes in 1469 to continue the voyages begun by Henry and his navigators. Awarded a generous contract by the Crown, which retained monopoly rights to certain valuable commodities, Gomes added another two thousand miles to the fourteen hundred miles of African coastline already explored. In the process, Portuguese ships crossed the equator for the first time in 1473, discovered the uninhabited island of São Tomé, and penetrated the Gulf of Guinea, where they reconnoitered what later Europeans called the Gold Coast as it turned sharply toward the east. This region soon became the center of Portugal's west African trade. In the meantime, Gomes turned a handsome personal profit. But when his contract expired in 1475, the royal monopoly on trade and exploration was entrusted to Afonso's son and heir, who ascended the throne as John II (r. 1481–1495) six years later. Described by historians as an enthusiastic and farsighted imperialist with a genuine passion for Africa and its products, the

new monarch also had a keen personal interest in trade development and voyages of discovery.

It was under his sponsorship, in fact, that the southernmost tip of Africa was finally reached by Portuguese captain Bartolomeu Dias in December 1487. In command of two caravels and a supply ship that (it was hoped) carried sufficient stores to permit the circumnavigation of the continent in one effort, Dias sailed from Lisbon in August, following the usual sea routes down Africa's west coast. After stopping at various points along the way, he landed on the shore of modern-day Namibia to claim the entire region for his monarch. But when he continued his voyage southward, contrary winds and a north-flowing current forced Dias to venture out into the Atlantic where, five hundred miles north of the south African tip, a fierce northerly gale blew his ships off course. For two weeks the small squadron sailed out of sight of land—a frightening experience in unknown waters—until it picked up westerly winds and resumed its course in expectation of reaching the African coast. When, however, Dias discovered that he could approach the mainland only by sailing northward, he realized that he had rounded the continent's southern end. Ahead lay the Indian Ocean and the wealth of Asia.

The captain then traveled eastward for several hundred more miles, going ashore briefly at Mossel Bay and a few other spots, before his exhausted crew compelled him to begin the homeward voyage. The country had little appeal, in any case. The natives of the region, recounted Duarte Pacheco Pereira in about 1565, were a "heathen, bestial people, [who] wear skins and sandals of raw hide.... There is no trade here, but there are many cows, goats and sheep and there is plenty of fish."[9] On his way back to Portugal, meanwhile, Dias sighted a large promontory he dubbed the Cape of Storms—an accurate description of maritime conditions in the area—but which King John II later renamed the Cape of Good Hope, in anticipation of finding a sea route to India.

Dias's voyage had opened a gateway to that goal, for "at this promontory," continued Pereira, "Africa comes to an end in the [Atlantic] Ocean, and is divided from Asia."[10] Of equal importance, the explorer had helped to improve upon navigational techniques for use in the south Atlantic. Earlier in the fifteenth century, Portuguese mariners had difficulty finding winds and currents that moved in the direction they wanted to go. In an age of sail, their vessels had to contend with both forces of nature, for even in a landlocked sea such as the Mediterranean it was almost impossible to travel directly from one port to another. These difficulties help to explain many of the navigational hazards and related fears the Portuguese had earlier

associated with rounding Capes Juby and Bojador. Gradually, however, their seamen had learned to tack along a course, instead of struggling against prevailing conditions. Building upon Dias's experience in particular, they discovered that by sailing due south from the Cape Verde Islands and away from Africa, outbound ships could avoid the unfavorable winds of the Gulf of Guinea. The strong westerlies encountered at a point farther south and west of the African continent would then carry vessels around the Cape of Good Hope and into the Indian Ocean. Those that were homeward bound followed the same route in reverse, sailing northwest into the Atlantic to the latitude of the Azores Islands, where other westerly winds would blow them back to Portugal.

The Dias expedition also effectively ended the first phase of Portuguese exploration. For most of the fifteenth century, gaining control of Africa's shores from Morocco to the Niger Delta on the Gold Coast had been the major focus of the kingdom's maritime efforts. During the 1460s and 1470s, as a result of these voyages, relations were opened with local rulers and fortified factories were constructed at various points until, by 1500, Portuguese merchants had replaced the Muslim Arabs as the dominant commercial agents in the region. Otherwise, no serious attempt was made to penetrate the African interior because of the very real dangers of native resistance and deadly disease. Even the coastal trading stations built along the shores were unhealthy for Europeans and occasionally vulnerable to attack. But because of their commercial importance, these factories had to be staffed and maintained, despite the high cost in human life noted by Columbus in his letter of 1498. In the meantime, colonists had settled on Portugal's island possessions in the east Atlantic from the Azores to São Tomé. There they built lucrative sugar cane plantations, worked by black Africans purchased from native slave traders on the Guinea coast. Not until later in the century, therefore, did the focus of Portuguese maritime efforts begin to shift explicitly toward the circumnavigation of Africa—achieved finally by Dias—in search of a viable sea route to Asia.

A full decade passed before the second phase of Portugal's imperial program began. It opened in 1497 with Vasco da Gama's inaugural voyage around the Cape of Good Hope and across the Indian Ocean to the port of Calicut on India's Malabar Coast. Yet this new phase had less to do with the discovery of unknown lands and waterways than with the imposition of Portuguese dominion over the well-established trade networks of maritime Asia. Two conditions were central to their success. First was their command of the sea in an area of the globe where China's retreat behind its frontiers after

1433 had produced a vacuum of naval power. If exploration had been their chief inspiration instead of diplomacy, the seven expeditions of Zheng He begun in 1405 might have placed the Ming Empire at the threshold of finding the direct sea route around Africa to reach Europe, rather than the Portuguese discovering the sea route to India. As it was, with Ming sea power increasing steadily at the time of the voyages, China was poised to become the dominant naval force of Asia. But its sudden withdrawal from international affairs overseas into self-imposed isolation within its own borders ended that prospect and created a void that no other Asian kingdom had the means or ambition to fill. The major states of Egypt, Persia, and landlocked Vijayanagar in southern India possessed no shipping at all, let alone armed shipping. Even such wealthy and strategic entrepôts as Hormuz on the Persian Gulf and Malacca at the tip of the Malay Peninsula had no oceangoing warships for their protection. Yet their continuing prosperity depended entirely on waterborne trade.

The second condition for Portugal's success was the geographic integrity and commercial unity of maritime Asia. These two qualities rendered it a highly cohesive and closely integrated region, despite the diversity of cultures that ranged around its shores from east Africa to Japan. But this unity also made maritime Asia extremely vulnerable to anybody with the determination and naval power to dominate it. The Portuguese possessed both, to which they added single-mindedness of purpose, pragmatism, complete ruthlessness, and unified command. Thus equipped, they rapidly defeated all local naval opposition, where any could be mustered, asserted their control over Asian commerce, and forged a seaborne empire secured by their warships and a system of factories built at strategic points along the coasts from Mozambique to China. As a result, within a decade of their arrival and for most of the sixteenth century that followed, Portugal held the dominant position in maritime Asia.

Initially, however, the Portuguese were peaceful and concerned only with trade, not conquest. When Vasco da Gama sailed from Lisbon in July 1497, he had been provided not just with maps and reports from other navigators, including Bartolomeu Dias, about what he might expect to find on the unexplored littoral of east Africa, but also with letters of introduction from the new king, Manuel I (r. 1495–1521), as well as a cargo of gold, pearls, woolen textiles, bronzeware, iron utensils, and additional merchandise that he hoped to exchange for pepper and other spices in Indian markets. Nor was this all. According to sixteenth-century chronicler Gaspar Correa, before his departure Da Gama had "asked the king to give

him a few prisoners who were condemned to death, in order to adventure them, or leave them in desolate countries, where, if they lived, they might be of great advantage when he returned," by reason of the languages they might learn and the geographic knowledge they might acquire.[11] This was clearly a trade mission, in other words, not a naval expedition to discover and claim unknown territories for the Portuguese Crown.

The voyage lasted for more than ten months, during which the ships encountered such difficulties, wrote Correa, that the crews grew "sick with fear and hardship ... [and] clamored for putting back to Portugal, [saying] that they did not choose to die like stupid people who sought death with their own hands."[12] At times, only Da Gama's stern leadership thwarted threats of mutiny or desertion by seamen frightened at sailing in uncharted waters. Otherwise, the voyage might have failed. At all events, following the sea route to south Africa recommended by Dias, who accompanied the small fleet on part of its journey, Da Gama rounded the Cape of Good Hope in October and traveled slowly along the shores of east Africa as far as Mozambique and Mombasa. Welcomed warmly at first by the Muslim authorities in both places, his reception cooled abruptly when it was discovered that he and his crew were Christian and alleged to be thieves (wrote Correa), whose real purpose was to "spy [upon] the countries under the device that they were merchants, and ... afterwards come with a fleet and men to take possession of the [land]."[13] All hope of obtaining Arab aid to cross the Indian Ocean thus evaporated. Farther north at Malindi, however, the Portuguese were given a friendlier reception and managed to hire a Muslim pilot to guide the fleet to Calicut, where it dropped anchor on 20 May 1498.

The culture that Da Gama encountered in south India was sophisticated, wealthy, and cosmopolitan. It was also rich in the commodities that Asia had to offer. A leading center of trade, Calicut's markets sold pepper, cloves, ginger, cinnamon, and other spices, in addition to precious stones, fine gold jewelry, silks, and excellent cotton textiles. By comparison, the goods brought out by the Portuguese were poor in quality and workmanship, and attracted very little interest among native dealers. Aided, however, by two Tunisian merchants fluent in Spanish and Italian who had been assigned to Da Gama as translators by the local authorities, he exchanged some items for a cargo of pepper. This earned a profit of nearly 3,000 percent when the small fleet returned to Europe in 1499 after a difficult voyage and the death of half the crew because of mishap or disease.

Despite these losses, Da Gama had demonstrated beyond doubt that a sea route to Asia existed and could be profitably exploited.

Inspired, moreover, by his captain's success, King Manuel assumed the title of "Lord of the Conquest, Navigation and Commerce of Ethiopia, Arabia, Persia and India." Though perhaps premature, this was no empty boast. On the contrary, the financial dividends of the voyage only encouraged the Portuguese to organize further expeditions regardless of the hazards of sea travel, in order to capitalize on the trade with India so recently opened. In the process, permanent links were forged between two regions of the world that had been separate hitherto, though at a heavy price. The Muslim Arabs—who (noted Correa) "were very powerful, and had so established and ingratiated themselves" in every port that they dominated maritime trade from east Africa and India as far as the Straits of Malacca—regarded the Europeans as interlopers on their preserve.[14] Nor did it take them long to appreciate the real threat posed by the Christian newcomers. Hence, the cordial reception initially extended to Da Gama by the Zamorin (from *Samudri raja*, meaning "lord of the sea"), or ruler of Calicut, had turned sour when the Muslim community lobbied him to reject the Portuguese as predators in disguise, whose real objective was "to see and spy, and afterwards to . . . conquer and plunder."[15] That the gifts Da Gama had made this Hindu prince were also of inferior quality and regarded with contempt strained troubled relations still further. As a result, when the fleet sailed for home in 1499, a climate of hostility and mistrust had developed between the Europeans and their royal host.

Although Hindus, Nestorian Christians, and other ethnic and religious groups also participated in the movement of goods across Asian waters, Arabs and to a lesser extent Muslims of Indian extraction predominated. Furthermore, their control of trade had been acquired quite peaceably, through a combination of intermarriage with local women (which also helped to spread Islam across the region), cooperation with local merchants, and good relations with local rulers, who then made little effort to either supervise or protect Arab traders and their commerce. Indeed, the policy of native princes was one of noninterference so long as they shared in the benefits of trade, which was organized, in turn, around close family connections and small partnerships. Numerous historians now argue that despite encountering some initial hostility, there is no reason to believe that the Portuguese could not have joined this complex mixture of traders, and that their only problem had to do with inferior European goods which had no appeal for Asian buyers. This is nonsense. Quite apart from the mutual animosity between Catholic Christianity and Islam that had played itself out for centuries in the Mediterranean, the Portuguese recognized very quickly after

1498—starting with Da Gama—that the only way to break the Arabs' jealously guarded control over the lucrative but closely knit commercial networks of the Indian Ocean was by brute force, not peaceful competition. Otherwise, they faced almost total exclusion.

On the basis of that conviction, two larger fleets sailed from Portugal in 1500 and 1502. The first one of thirteen ships, commanded by Pedro Alvares Cabral, is most significant for the accidental discovery of Brazil. While swinging widely to the west in order to catch the winds that would carry his outbound fleet around the Cape of Good Hope and on to India, Cabral was blown so far off course by a storm that he landed on the east coast of South America, instead. This accident laid the foundation for Portugal's subsequent claim to a large portion of the New World. Continuing on to Calicut, meanwhile, Cabral's reception by the Zamorin was very tense from the outset and soon led to open hostility. An attempt to found a factory in port ended with violence, in retaliation for which Cabral burned several Arab ships then in harbor and bombarded the city itself. His prospects improved farther south at the port of Cochin, however, where the local ruler was more receptive to Portuguese overtures for trade.

The second expedition of twenty heavily armed vessels sailed in 1502 under the command of Vasco da Gama, the newly appointed admiral of the Indian Sea. Its purpose was explicitly military: to cripple Muslim seaborne trade in the Indian Ocean and to assert Portuguese domination in its place. Hence, Da Gama's first task after rounding the Cape of Good Hope was to demonstrate his naval strength at various Muslim ports of east Africa, especially the prominent city-state of Kilwa. Only then did he sail for India where, for seven months, he harassed Arab shipping along the Malabar Coast, bombarded Calicut a second time, defeated a makeshift fleet assembled by the Zamorin, and established factories at Cochin and Cannanur. Finally departing for home in late February 1503, his ships' holds laden with cargoes of spice and plunder, Da Gama left five armed vessels behind at Cannanur to continue harassment of Muslim shipping. This small squadron represented the first permanent European naval presence in the Indian Ocean.[16]

The real architects of Portugal's seaborne empire in Asia were, however, its first two viceroys, Francisco de Almeida (1505–1509) and Afonso de Albuquerque (1509–1515). As the Crown's chief administrative officers, viceroys typically served a three-year term and, because of the time it took to communicate with Lisbon, exercised great independent authority in military, diplomatic, and commercial affairs. Almeida's contribution was to recognize that without

command of the sea, fortresses ashore would do little good. The Portuguese had neither the manpower nor the material resources to defeat the powerful armies of Asian potentates. Yet no matter how much force these rulers could dispose on land, none could capture a stout Portuguese fortress provisioned and reinforced from the sea. Furthermore, the actions of Cabral and Da Gama had demonstrated convincingly that artillery aboard warships fighting in squadrons, rather than individually, vastly increased the superiority of their armament and proved highly effective against people of technological and cultural sophistication who inhabited an area of the globe that had no naval tradition. Recognizing this significant advantage, Almeida began his viceroyalty by assuring Portuguese naval supremacy along the east African coast, where he built fortified factories at Soffala (1505) and Mozambique (1507), and formed an alliance with the sultan of Malindi. But his greatest accomplishment occurred in 1509 with the defeat of an improvised Muslim fleet near Diu on the Gulf of Cambay in northern India.

Thereafter, Portuguese conquests and power spread rapidly under the gifted leadership of Afonso de Albuquerque. He had the genius to recognize the coherence of Asian geography, whose contours led—as if by a fatal necessity—from east Africa and India, through the Straits of Malacca, and all the way to the spice islands of Indonesia, China, and Japan. He further perceived that possession of a few strategic points would give Portugal control over the major waterways of Asia and its maritime trade. Thus armed with a pragmatic plan of action backed by tenacity of purpose, Albuquerque first seized "Golden" Goa in 1510 on India's Malabar Coast, where "duties on the fruits and produce of the land," noted Duarte Barbosa in about 1520, "yield the King our Lord yearly twenty thousand *cruzadoes*, in addition to the port dues" levied on ships and cargoes that came from throughout the East.[17] The city soon supplanted Calicut as the principal port of trade in the region and became the headquarters of Portugal's growing Asian empire. The victory at Goa was succeeded by the capture of Malacca in 1511, which commanded the straits that divided east and west Asia, and Hormuz in 1515, which brought control of the Persian Gulf.

Possession of these three key strongholds ensured Portuguese mastery of the major trade routes in the Indian Ocean. Only the Red Sea eluded their control, an effort to seize the port of Aden having failed in 1513. Their occupation of Socotra, an island captured by Almeida in 1507 near the Horn of Africa, gave the Portuguese partial command of commerce in that area nevertheless. In the meantime, they made their first contact with China in 1513, established a

presence on Ceylon in 1515, secured the spice-producing Banda and Moluccas Islands of Indonesia between 1516 and 1519, and acquired Diu in 1534. And in the 1540s, they were the first Europeans to reach Japan.

Hence, in just forty years since Vasco da Gama first sailed into Indian waters, the Portuguese had successfully imposed their power across maritime Asia and asserted control over much of its trade. They really were lords, in other words, "of the Conquest, Navigation and Commerce" of the East Indies, just as King Manuel I had proclaimed in 1499. This was a remarkable achievement for a small country poor in resources, with a population of no more than 1.5 million people. It becomes still more impressive when one recalls the kingdom's other heavy commitments in Morocco, west Africa, and Brazil, which it began to colonize after 1539. To describe their conquests and discoveries from the Cape of Good Hope to Japan, the Portuguese adopted the term Estado da India (State of India). The outbound voyage along what by now were well-established routes was likewise called the *carreira da India*. In both cases, the meaning of "India" was not limited to the subcontinent, but included the whole East Indies.

Commerce, not conquest, remained the principal focus of Portugal's Asian empire, though it relied heavily on sea power to extend and protect its interests. The kingdom simply could not deploy sufficient military strength to engage in major operations against native forces on land. An attempt to subdue the whole island of Ceylon in the mid-seventeenth century confirmed that fact with disastrous results. The twenty-four hundred people or so who sailed for Asia each year after 1500 from Lisbon and other ports also severely strained the country's scant human resources at home, while even at the height of its imperial power overseas the number of Portuguese living in communities scattered across the East Indies was probably fourteen thousand at most. These figures do not include the large numbers of people who died annually from shipwreck, combat, and disease, for which there are no reliable statistics. To be sure, some sporadic attempts were made to gain control over the gold mines of the east African interior. But these ended usually in failure. At best, the Portuguese were able to disrupt the Arab caravan networks ashore by occasional harassment, in order to drive up the cost of goods that passed overland by way of the Red Sea and Middle East to the Muslim and Italian merchants of the Mediterranean.

For the most part, though, contacts with Africans and Asians were limited to maintaining friendly relations for the sake of commerce, rather than subjugating or settling large areas that were

impossible to defend. The Portuguese concentrated, instead, on enforcing a monopoly over the direct spice trade to Europe (which returned profits on average of 200 to 400 percent) and the interport or "country" trade of maritime Asia that was even more lucrative. Under this policy, certain ports and certain goods (especially spice) were designated as the exclusive right of the Crown, whose control was exercised through a royal trading firm called the Casa da India. In fact, Portuguese success in Asia was attributable largely to royal support and direction from the days of Henry "the Navigator," which had made the kingdom's imperial ambitions a national enterprise from the outset. Certainly, no private firm or individual had the financial resources or naval force to sustain costly commercial ventures in the East Indies, let alone intrude successfully into the well-established Muslim trade networks.

The royal monopoly was anchored, in turn, by a chain of fortified trading posts established from one end of Asia to the other, and protected by Portuguese sea power. Each was staffed by a resident administrator, called a "factor," who supervised business transactions, collected various surcharges, and governed the local community. In time, more than fifty such factories stretched from Mombasa in east Africa, to Colombo in Ceylon, Ternate in the Moluccas, and Macau (est. 1557) in southern China. Under this monopoly structure, native Asian shipping participated in the country trade as before, carrying goods from port to port—provided, however, that merchants first obtained a Portuguese sailing license, or *cartaz*, for a fee. Dealers in spice and other designated commodities were similarly required to pay customs duties at Goa, Hormuz, or Malacca, a profitable policy that was ruthlessly enforced against transgressors. Unlicensed ships were liable to be sunk or seized, and their crews punished with death or mutilation, if caught by Portuguese warships that patrolled the major sea lanes. In return for compliance, however, native vessels were provided with naval protection against the many pirates who infested Asian waters.

Despite these precautions, the Portuguese never secured total control over Asia's commerce or plugged all the holes in their monopoly system. They simply lacked the resources on land and at sea to enforce their interests everywhere at once. The geographic extent of this enormous region of the globe also worked against them. They never succeeded, for example, in closing the Red Sea entirely to Muslim shipping nor in halting the clandestine trade in spices and other goods along the lesser commercial routes of Asia's backwaters. They were similarly unable to dominate the South China Sea, where the belligerent tactics that had worked so well in the

Indian Ocean failed against the stout ships of the Chinese coast guard. Eventually, the Portuguese secured a monopoly of the carrying trade between China and Japan (ca. 1574), but on terms dictated by the Ming authorities. As a result of these gaps in the monopoly structure, Arab, Indian, Chinese, and Malay merchants remained prominent in much of Asia's commerce, whether or not they carried the *cartaz*.

Nevertheless, the Portuguese became major exporters of eastern goods, transporting perhaps half the spices consumed in Europe during the early and middle sixteenth century. (The other half reached European markets via the old route through the Red and Mediterranean Seas.) Meanwhile, Portuguese domination over much of maritime Asia's country trade in everything from Persian carpets and Indian cottons to aromatic woods, Japanese hides, and Chinese silk significantly altered commercial patterns across the region. In time, Portuguese became the language of trade throughout the East Indies and remained so until the nineteenth century. The most dynamic feature of Portugal's seaborne empire was, however, its dispersion from east Africa to the Pacific rim, best illustrated by the time it took to sail from west to east. The round trip from Goa to Nagasaki in Japan lasted from eighteen months to three years, depending upon the rhythm of the monsoon winds. By contrast, the outbound voyage from Europe to Goa could be completed in just six to eight months.

During much of the sixteenth century, Portugal's wealth multiplied. Its dominant position in Asian commerce also gave the small kingdom control over Europe's most valuable trade and made it the envy of its neighbors. At the same time, it profited from its plantations on the Atlantic islands and coastal Brazil. Above all, however, the Portuguese achievement displayed the key elements that contributed to the steady rise of European power around the globe in succeeding centuries: ambition, technological superiority in guns and the use of ships, tactical skill, commercial interest backed by naval force, effective planning and organization, and state support. Yet the establishment of the Portuguese seaborne empire did not develop from a grand strategy. Only part of the planning was carried out in Lisbon. Part also was suggested by Muslim and Hindu traders. Perhaps the greatest part was played by the pragmatic vision of the early viceroys, Almeida and Albuquerque, who were quick to recognize the integrated nature of Asian trade and geography, and who also understood the strategic importance of particular ports that, in the right hands, could dominate the region. Building upon the early work of successive explorers sent out by Henry "the Navigator," these

royal officials were the real founders of Portugal's "trading post" empire in Africa and Asia.

At the same time, however, Portuguese naval supremacy in the Indian Ocean disguised two fatal weaknesses of their imperial structure. One was the kingdom's lack of resources that were too thinly spread from Brazil to Japan. Perennially short of ships, men, and dockyard facilities, except at Goa, the technological gap between Portugal and its Asian opponents at sea was also not that large. China's ship-building techniques were certainly equal to those of Europe, though this would begin to change in the seventeenth century. What the Asians really lacked was the close concentration on a specific naval aim. When combined with their superior weaponry and utter ruthlessness, that kind of focus assured the Portuguese all the advantages. The second fundamental weakness was financial. The kingdom's Asian operations were supposed not only to pay for themselves but also to enrich the Crown. This arrangement was severely undermined, however, by the enormous expense of protecting a vast seaborne empire and preserving the monopoly of trade—what modern business practice refers to as "overhead." When that cost was factored into the imperial equation, it was clear that dependence on long-distance commerce from India to Europe, though supplemented by Asian taxes and tributes, could not make Portugal's empire finance itself. It was simply too expensive to maintain.

Consequently, by the late sixteenth century Portuguese power in the Indian Ocean had begun to erode. Already faced with a challenge from Spain, it did not take long for Dutch, English, and French rivals to enter into competition by investing in their own imperial ventures, most of which focused on Asia. It is significant, however, that when these would-be competitors embarked on their separate quests for commercial empire in the Far East, they followed Portugal's example. Until the mid-eighteenth century, they too avoided territorial conquest in favor of establishing trading posts (or in the case of the Dutch, seizing those previously held by the Portuguese). They likewise obtained concessions from local rulers and concentrated their power at sea, since commercial, not territorial empire was the goal. They also learned from Portuguese mismanagement the importance of founding their efforts upon a solid financial footing. They recognized, as well, the geographic integrity of maritime Asia, which their predecessor had exploited with such success. But in spite of this competition and the steady erosion of its imperial position, Portugal maintained a presence in Asia until the loss of its last colonies at Goa (1961), Mozambique (1975), and Macao (1999) in the late twentieth century brought that presence to an end.

Notes

1. Cecil Jane, trans. and ed., *The Four Voyages of Columbus*, 2 vols. (London: Hakluyt Society, 1930–1935; reprint, New York: Dover Publications, 1988), 2:8.

2. Gomes Eannes de Azurara, *The Chronicle of the Discovery and Conquest of Guinea*, Charles R. Beazley and Edgar Prestage, trans. and eds., 2 vols. (London: Hakluyt Society, 1896), 2:27.

3. Ibid.

4. Ibid.

5. Peter Russell, *Prince Henry "the Navigator," a Life* (New Haven: Yale University Press, 2001), 112–113.

6. G. R. Crone, trans. and ed., *The Voyages of Cadamosto* (London: Hakluyt Society, 1937), 16.

7. Ibid., 28.

8. For a more detailed discussion of the three papal decrees, see Charles R. Boxer, *The Portuguese Seaborne Empire, 1415–1825* (London: Hitchinson & Co., 1969), 20–24.

9. Duarte Pacheco Pereira, *Esmeraldo de situ orbis*, George H. T. Kimble, ed. and trans. (London: Hakluyt Society, 1937), 154–155.

10. Ibid., 155.

11. Gaspar Correa, *The Three Voyages of Vasco da Gama, and His Viceroyalty*, Henry E. J. Stanley, trans. and ed. (London: Hakluyt Society, 1869), 75.

12. Ibid., 51.

13. Ibid., 99.

14. Ibid., 155.

15. Ibid., 157.

16. Glenn J. Ames, *Vasco da Gama, Renaissance Crusader* (New York: Pearson Longman, 2005), 100.

17. Mansel L. Dames, trans. and ed., *The Book of Duarte Barbosa*, 2 vols. (London: Hakluyt Society, 1918–1921), 1:175.

CHAPTER 3

SPAIN AND THE DISCOVERY OF A NEW WORLD

If the Portuguese discovery of the sea route to India and the riches of the Far East represents the first milestone in the history of European exploration, then the Spanish discovery of the Americas on the western side of the Atlantic Ocean represents the second. When considered individually, these two events, both of which occurred at the close of the fifteenth century within a mere six years of each other, are important in their own right. But when considered together, they constitute a major watershed in world history. The reason is simple. Prior to the early Portuguese and Spanish voyages of discovery, a chief feature of human civilization was the wide dispersion and almost total isolation of the different cultures that occupied the globe. As historian Charles R. Boxer wrote in 1969, the various societies

> that waxed and waned in the whole of America, and in a great part of Africa and the Pacific, were completely unknown to those in Europe and Asia. Western Europeans . . . had only the most tenuous and fragmentary knowledge of the great Asian and North African civilizations. These on their side knew little or nothing of Europe north of the Pyrenees and of Africa south of the Sudan . . . and they knew nothing whatever about America. It was the Portuguese pioneers and the Castilian *conquistadores* from the western rim of Christendom who linked up, for better and for worse, the widely sundered branches of the great human family. It was they who first made Humanity conscious, however dimly, of its essential unity.[1]

Yet Boxer was not the first to see the importance of these twin events. Contemporaries and near contemporaries of the Age of

Discovery also grasped the significance of the Iberian achievement. In the 1516 preface of his book *The Decades of the New Worlds or West Indies*, for example, Spanish author and royal councillor Pietro Martire d'Anghiera contrasted the great deeds of ancient times with those of his own age. Without intending to offend "the reverence due to our predecessors," he wrote, "whatsoever from the beginning of the world hath been done or written to this day, to my judgment seemeth but little, if we compare what new lands and countries, new seas, what sundry nations and tongues, what golden empires, what treasures and pearls they left" to be discovered by men of his own times.[2] In the dedication of his *General History of the Indies* (1552), Spanish chronicler Francisco López de Gómara was still more explicit when he hailed the discovery of ocean routes to the so-called West and East Indies as "the greatest event since the creation of the world, apart from the incarnation and death of Him who created it."[3] The eighteenth-century political economist Adam Smith similarly asserted in his *Wealth of Nations* (1776) that the "discovery of America and that of a passage to the East Indies by the Cape of Good Hope are the two greatest and most important events recorded in the history of mankind."[4]

But here the convergence ends. For in sharp contrast to the persistence and careful planning behind Portugal's state-sponsored, century-long enterprise of exploration through the south Atlantic and around Africa to India, haste, amateurism, random chance, and simple good luck lay behind Spain's early discoveries, most of which occurred in just twenty years. Much of that success was also owed, meanwhile, not to Spanish talent or foresight. It was owed rather to the relative ease with which European scholars, explorers, merchants, soldiers, and seamen moved from service in one kingdom to another, taking with them experience and information useful to their new royal employers. Under such circumstances, and despite efforts to prevent the results of its expeditions from leaking to other states, Portugal had most to lose from this dissemination of its secrets and personnel, while rival Spain had the most to gain. Indeed, that country's rapid and dramatic, if belated, entry into maritime exploration at the close of the fifteenth century depended upon talented foreigners like the Genoese Columbus and the Portuguese Magellan, both of whom had honed their seafaring skills and geographic knowledge while in service to the Crown of Portugal.

The voyages undertaken by the two kingdoms also produced different results, though their motives were more or less the same: religion and profit. For what Portuguese captains like Vasco da Gama, Pedro Alvarez Cabral, and Afonso de Albuquerque encountered on

their arrival in Asian waters was not a wholly unknown world peopled by primitive savages. They found, instead, what they had expected to find—a mosaic of sophisticated cultures and rich principalities, many of them already familiar to western Europeans from the accounts of Marco Polo and other medieval travelers. These countries, with their teeming populations, were long accustomed, moreover, to dealing with Arab, Persian, and Hindu merchants over well-established commercial routes that linked one end of Asia to the other by land and sea. From the outset, therefore, the Portuguese newcomers had to rely on diplomacy, backed by naval power and occasional brute force, if they were to overcome the obstacles of jealousy, hostility, and resistance in their pursuit of trade and seaborne empire in a highly integrated region of the globe.

In sharp contrast, Spanish explorers, or those employed by Spain, stumbled upon a whole new world on the opposite side of the Atlantic Ocean, whose very existence no one in the old world of Europe had even imagined. The cultures they first encountered in the Americas were also entirely different from the great cosmopolitan societies of Asia. The Caribbean Islands were lightly inhabited by simple, peace-loving people, inclined to timidity, who lived in modest villages close to a state of nature and were easily subdued. How different were the highly developed, better organized, and far more warlike civilizations of Mexico and Peru, which the Spaniards later met on the mainland to their great surprise. Yet in spite of their level of sophistication, these were also brittle societies, separate from each other, internally riven, burdened with conquered subjects hostile to their rule, and susceptible to European diseases from which they had no immunity. Thus already handicapped, the Aztec and Inca empires were defeated quickly by Spanish determination, ruthlessness, superior weaponry, and blind luck. If, then, the land-based empire that Spain built in the New World was founded upon conquest and colonization, unlike Portugal's trading post empire in Africa and Asia, it is because Spanish attention overseas was directed toward a more sparsely populated region where the various cultures were largely isolated from one another, less resilient, and less able, therefore, to resist European arms.

For a variety of reasons, however, Spain's entry into the field of maritime exploration was delayed, even though some Spanish seafarers had ventured into south Atlantic waters during the early fifteenth century in competition with the Portuguese. To begin with, the kingdom was not yet united under a strong centralized monarchy. Because its process of territorial unification and national consolidation lagged well behind that of Portugal, "Spain" was still little

more than a geographic expression at the time of Columbus's inaugural voyage of 1492. It consisted, instead, of two autonomous realms, loosely connected by a royal marriage. One was Castile in central Iberia; the other was Aragon, which faced the western Mediterranean.

With a population of more than 8 million people, Castile was the largest and wealthiest of the three major Christian kingdoms that occupied the peninsula. But it was frequently convulsed by civil war between the powerful Castilian nobility and the weak monarchy. Its Reconquista to expel the Moors from Spanish soil, begun in the eleventh century, was also ongoing. By 1400, however, only the Muslim emirate of Granada remained as a virtual client kingdom of Castile, until it, too, was defeated and absorbed in 1492 after a ten-year struggle. Aragon, on the other hand, was approximately the same size as Portugal and consisted of three areas: Catalonia, the commercial heart of the kingdom; Aragon itself; and Valencia, a region noted for its agriculture. Additional territories had also been acquired in the late Middle Ages with the seizure of Sardinia, Sicily, southern Italy, and the Balearic Islands in the western Mediterranean. But expansion had both weakened the Aragonese Crown and exposed it to repeated revolts by the nobility, just like its Castilian counterpart.

This was the situation in October 1469 when Isabella, sister of the king of Castile, married Ferdinand, heir to the throne of Aragon. The royal union immediately sparked a decade-long dispute over the Castilian succession led by jealous nobles. They feared that the marriage would strengthen the monarchy against them. Seeing an opportunity to increase his power and territory, Afonso V of Portugal also entered the quarrel. In retaliation, Isabella and Ferdinand licensed privateers and encouraged illicit trafficking along the Guinea coast in violation of Portugal's monopoly. Ultimately, though, the opposition to Isabella's succession failed. In 1474, she ascended the throne of her late brother, despite the outbreak of armed resistance by the nobility and open war with the Portuguese. Five years later, Ferdinand inherited the Aragonese crown in his turn. These events, combined with their lack of military success, at last forced the dissident Castilian nobles to acknowledge Isabella as their rightful queen in 1479. With the union of the two crowns, a united Spain now became a possibility under the victorious and powerful monarchs.

Yet Ferdinand and Isabella made no attempt at this time to create a single, monolithic state by combining their two realms into one monarchy. That would not occur until the accession of their grandson Charles, the future Holy Roman Emperor, to the Castilian throne in 1504 and the Aragonese throne in 1516. Until then, Aragon

remained an autonomous federation of territories, administered by viceroys appointed by the king, in which established traditions of government by consent were preserved through a representative body called the Cortes. Castile similarly remained a separate entity, though in this case the two monarchs worked together to ensure their superiority over all possible rivals to royal authority. As a result of that joint effort, Castile was freed from internal division that had formerly preoccupied its attention and drained its resources, and order was restored to a countryside long troubled by civil conflict. Peace also gave the monarchs renewed energy and strength to pursue expansionist policies. Their conquest of Muslim Granada in 1492, which ended Spain's Reconquista after a decade-long campaign, was one expression of that newly acquired confidence. Isabella's decision later the same year to support Columbus's Enterprise of the Indies was another.

Up to this point, however, Spanish interests overseas had concentrated on the western Mediterranean and North Africa. Since 1315, in fact, Castilian monarchs had claimed, as part of their ongoing struggle against the Muslims of Iberia, "that acquisition of the kingdoms of Africa belong to us and our royal right." They then extended that prerogative over time to include the *tierras de allende*—"the lands of beyond"—thus initiating a long competition with Portugal. No less than its smaller neighbor, Castile required more arable land to feed its growing population. It also desired the benefits of trade and direct access to the sources of gold in sub-Saharan Africa. To achieve those ends, some attempts were made during the late fourteenth and early fifteenth centuries to acquire islands in the south Atlantic. Castile's success in asserting its hold on the Canaries in 1436 over rival Portugal is just one example. Soon enough, however, domestic upheavals had interrupted any further efforts at maritime expansion. After 1479, Spanish activity in that direction was also blunted by the Treaty of Alcaçovas-Toledo, which ended the war with Portugal over Isabella's succession. Notwithstanding their defeat in that struggle, the Portuguese gained some of their principal war aims from the agreement. Chief among these was Castile's recognition of their monopoly of exploration, trade, and conquest down the west coast of Africa, which effectively limited any future navigation by Spanish seafarers to the latitudes of the Canaries.

It was no coincidence, therefore, that when Ferdinand and Isabella decided once again to sponsor voyages of exploration during the final decade of the fifteenth century, they looked westward across the Atlantic. They had no other option. Furthermore, if in retrospect

the greatest achievement of their joint reign was the discovery and subsequent colonization of the Americas, it was purely accidental. For they, like the Portuguese, were searching initially for a sea route to Asia. Nor at first did their new project meet with widespread enthusiasm from well-placed contemporaries. On the contrary, the Enterprise of the Indies was denounced by many of the monarchs' closest advisers as a waste of effort and resources. Indeed, if not for the persistence of Christopher Columbus and a few key persons at Isabella's court, credit for having discovered a vast New World across the wide "Ocean Sea" might have gone to a kingdom other than Spain. That kingdom might even have been Portugal, had its monarch endorsed Columbus's plan (as he famously expressed it) of sailing west to reach the East.

Columbus and His Enterprise: The Accidental Discovery of a New World

Despite his renown, little is known of the explorer beyond shreds of evidence and much conjecture, save that he was born into a prosperous Genoese merchant family in 1451 and had gained his first maritime experience aboard trading vessels to Spain, Portugal, England, and perhaps even Iceland. Starting in 1478 or 1479, he spent several years at Lisbon, where he married the daughter of Bartolomeu Perestrelo, a well-connected Portuguese captain who had led the colonization of the Madeiras by order of Prince Henry "the Navigator." Already familiar with the sea lanes of the western Mediterranean and north Atlantic from youthful experience, Columbus now expanded his nautical education by making several voyages to the islands of the south Atlantic under the Portuguese flag. His knowledge of sugar production in the Azores and the Madeiras revealed in his later letters further suggests that he was involved for a time in the triangular trade in gold, slaves, and sugar from Africa and the Atlantic islands to Portugal. According to his son and first biographer, Ferdinand, Columbus informed himself, as well, "of the other voyages and navigations that the Portuguese were making to [São Jorge da] Mina and down the coast of Guinea, and greatly enjoyed speaking with the men who sailed in those regions."[5]

It was also during this period, continued Ferdinand, that "one thing leading to another and starting a train of thought," Columbus began to speculate "that if the Portuguese could sail so far south, it should be possible to sail as far westward, and that it was logical to expect to find land in that direction."[6] He had reached that

conclusion after careful study of available works on geography and astronomy, in particular the *Cosmographia* of the ancient Greek scientist Ptolemy (first translated into Latin in 1406) and the *Imago Mundi* (or *Image of the World*, published in 1410) of French philosopher Cardinal Pierre d'Ailly. He had also scrutinized the works of medieval travelers like Marco Polo, and whatever papers and sea charts were available to him in Portugal. Many of the books consulted by the explorer still exist in European archives, incidentally, with marginal notations in his own hand.

Drawing upon these sources, Columbus convinced himself that the distance between Europe and Asia was far less than it actually is. Beginning with Ptolemy's estimate that the circumference of the world was 18,000 miles (6,000 miles too short) and Polo's later estimate that the Asian continent extended 1,500 miles farther east than it does, Columbus reckoned the distance from the Canaries to the outer islands of "Cipangu" (i.e., Japan) to be just 2,500 nautical miles.[7] In reality, it is five times greater; yet, Columbus could back his calculations with reference to three additional authorities. One was Pierre d'Ailly who, having estimated that water covered only a quarter of the earth, had asserted that "the sea is navigable in a few days if the wind is favorable."[8] Another, even more seductive source, because of its relation to scripture, was a passage in the book of Esdras (6:42)—an apocryphal text still included in contemporary Bibles—which stated that water covered a mere seventh part of the globe. Both authorities seemed to be confirmed, finally, by the work of Paolo Toscanelli (1397–1482), a Florentine geographer and mathematician who had also proposed reaching the Far East via the Atlantic Ocean in a 1474 letter to the king of Portugal. In support of that project, he too had grossly underestimated the distance between Europe and Asia, were one to sail westward to Japan and thence to China.

Columbus likely knew of Toscanelli's letter, and some historians believe that they corresponded with each other. Whatever the case, Columbus revised the Florentine's calculations downward in a way that shortened the distance from the Canaries to Japan still further. This revision, combined with his reading of the traditional sources he also consulted, placed the Japanese archipelago in the approximate location of the modern-day Virgin Islands. The would-be explorer paid close heed, as well, to the anecdotal evidence he heard from mariners of the day. He was intrigued, for example, by reports of several Portuguese captains about carved bits of driftwood found at sea which (they had concluded) were carried from an island or islands lying farther to the west by stiff winds and currents. Similar

accounts from the Azores alleged that when strong westerly or northwesterly winds blew, the sea washed whole pine trees ashore, though pines were not native to the islands. Human corpses bearing features entirely different from those of Europeans were also said to have come aground in the same manner. Reflecting on the various sources of his information, both geographic and anecdotal, Columbus became convinced (wrote his son Ferdinand) that "to the west of the Canary and Cape Verde Islands lay lands which could be reached and discovered"—in a word, Asia.[9] He further believed that the voyage might be accomplished easily in a matter of days or weeks, as the geographic distance was relatively small. That thinking inspired his famous Enterprise of the Indies.

It was one thing, however, to conceive of such a scheme. It was quite another to find a monarch who would back it with men, money, and ships. For without state support, the project was impossible. But many contemporaries doubted the feasibility of the plan, in any case. They were skeptical about Columbus's geography and the heavy financial costs involved. Nor was it helpful that Columbus also presented potential royal sponsors with a long list of demands for personal reward should his enterprise succeed. After all, wrote Ferdinand in defense of his father's unvarnished self-interest, "being a man of noble and lofty ambitions, he would not covenant save on such terms as would bring him great honor and advantage, in order that he might leave a title and estate befitting the grandeur of his works and merits."[10]

For a variety of reasons, therefore, Columbus encountered much difficulty in finding a monarch who would underwrite his venture. Twice he was rebuffed by the Portuguese royal authorities, first in 1484 after careful examination of the project, and second in 1488 after Bartolomeu Dias's voyage around the Cape of Good Hope had opened a viable sea route to India. Cost was also a major concern. Consequently, wrote Ferdinand of his father's failure, though King John II had "listened attentively . . . , he appeared cool toward the project, because the discovery and conquest of . . . Guinea had [already] put the prince to great expense and trouble without the least return."[11] Hence, he was not inclined to spend additional money on exploring Atlantic waters to the west, where Portuguese voyages to date had found nothing but a few scattered islands.

Undaunted, if disappointed, by these initial rebuffs, Columbus turned next to the Spanish monarchs, who, he believed, might be better disposed to endorse his enterprise. Should they too reject it, however, he was prepared to appeal to the kings of England and France. Though received at the Spanish court in 1486 and given a

sympathetic hearing, Columbus's enthusiasm for the venture was only partially shared by Isabella and Ferdinand, who gave no commitment of support. Instead, they had the Genoese seaman lay his proposal before a commission of geographers, scholars, experienced pilots, and theologians especially appointed to scrutinize the plan. The results of their deliberations were not reported to the Crown until four years later. Concluding that a westward route to Asia rested upon many dubious geographic assumptions, the commissioners dismissed the scheme as impractical and advised the two monarchs to reject it.

From that third rebuff has evolved an enduring popular myth that the council's decision resulted from medieval resistance to the winds of change stirred by the "modern" thinking of the Renaissance. The origin of that myth is Washington Irving's 1828 biography of Columbus, the first major modern account of the explorer's life in English, or in any other language, for that matter. Writing of the commission's deliberations, which he linked implicitly with the Inquisition also introduced into Spain by the Catholic monarchs at this time to root out "any opinion that savored of heresy [and] make its owner obvious to odium and persecution," Irving contrasted the dullness and backward thinking of the commissioners with the vision and natural eloquence of Columbus in "pleading the cause of the new world." Impeded in the progress of their scientific knowledge by what Irving called "monastic bigotry," these men assailed the Enterprise of the Indies with biblical citations, evangelical authority, and ignorance disguised as erudition, instead of with sound geographic objections. Even to Columbus's simplest proposition—the spherical shape of the earth—"were opposed figurative texts of scripture," not scientific fact. Thus confronted by a preponderance "of inert bigotry and learned pride in this erudite body, which refused to yield to the demonstrations of an obscure foreigner," Irving asked rhetorically, "can we wonder at the difficulties and delays he experienced at courts, where such vague and crude notions [of the world] were entertained by learned [men]?"[12]

But the "learned men" whom Irving so vilified were not just the best minds of Spain. They, too, had immersed themselves in the same texts and geographic sources Columbus had consulted, albeit with different results. They were well aware, moreover, of the spherical nature of the globe. That geographic fact, established centuries before by Greek and Roman authority, was equally clear to medieval scholars and to anyone else who lived by, or drew his livelihood from, the sea. To such people, whether educated or not, the curvature of the earth at the horizon was obvious. The commission's

rejection of Columbus's enterprise was, therefore, an informed decision based upon the best scientific, geographic, and practical knowledge of the day, instead of narrow-minded prejudice or superstition. Also damaging to the explorer's position (as his son later admitted) was that Columbus had withheld important details of his proposal from the commissioners for fear that others would steal his idea and triumph in his place. It was doubtful, in any case, that Isabella and Ferdinand could have supported the venture at this time. They were too preoccupied with the conquest of Granada, now in its final stages, and could ill afford to divert attention or scarce resources to a secondary project of dubious result.

Nevertheless, Columbus persisted, even seeking an audience with Isabella at her camp before the walls of the besieged Muslim stronghold. It was there, "in the camp-city of the Holy Faith and in the holy faith," wrote royal historian Gonzalo Fernández de Oviedo in 1547, that the discovery of the Americas "had its beginnings."[13] Though the queen was prevailed upon to reconsider the proposal for an enterprise to the Indies, it was still opposed by her council. No doubt much of that resistance was due, wrote Ferdinand Columbus, to the many demands that his father now presented to Isabella should he succeed, but which "she was loath to grant."[14] Heading his list were the titles of admiral of the Ocean Sea and viceroy of the Indies, with the prerogatives and preeminences both offices commanded. But such appointments were usually only entrusted to princes of the blood or great aristocrats. Columbus also wanted for himself and his heirs noble status, jurisdiction over all official appointments and matters of trade in the lands he discovered, and 10 percent of all proceeds that these territories might produce. Can there be any surprise that, having just brought the Castilian nobility to obedience in a bitter civil war over Isabella's succession, the queen and her husband balked at creating what amounted to a great feudal power in the Indies almost independent of the Crown, if Columbus fulfilled his promises?

And yet he prevailed. With the formal surrender of Granada on 2 January 1492, the Catholic monarchs were free at last to direct their attention to other matters. One was the expulsion of the Jews from Spanish soil, which took effect on 1 July the same year. A second was Columbus's much-debated Enterprise of the Indies. Once more the project was submitted to a learned commission for review, but although this time the recommendation was favorable, the royal council still objected because of Columbus's exorbitant demands. At length, however, Isabella and Ferdinand were induced by several well-placed courtiers to back a modest expedition. Foremost among

them was Luis de Santángal, the influential keeper of the privy purse, who argued that the scheme offered the prospect of considerable gain for the Crown and the Christian faith at a relatively low cost. Hence, in late April, seven royal capitulations were issued in preparation for the voyage, the most important of which granted everything Columbus had wanted. Santángal also arranged for the necessary funding, only part of which was contributed by the Crown. The rest came from a variety of private and public sources, including the port of Palos that provided two of Columbus's three ships.

When the preparations were at last completed, the *Santa Maria*, *Pinta*, and *Niña* sailed from Palos early on 2 August 1492 with Columbus and ninety men aboard. Their commission was "to discover and acquire certain islands and the mainland in the Ocean Sea," for which purpose the newly created admiral carried letters of introduction from the Spanish monarchs to Asian rulers, in particular the "Grand Khan," or emperor of China.[15] Also sailing with Columbus aboard his flagship *Santa Maria* was a Jewish convert to Christianity, fluent in Arabic, to serve as translator. Hence, just like their Portuguese counterparts, Columbus and his royal sponsors anticipated that he would find on the far side of the Atlantic exactly what they expected him to find—Asia and its riches.

At first, the small fleet sailed south toward the Canary Islands, where it stayed for a month to take on additional stores and to make repairs or adjustments to all three vessels. Resuming the voyage on 6 September, Columbus turned west with the trade winds into the unknown sea. As time passed without catching the least glimpse of land, the crewmen began to lose confidence in their commander, as they grew doubtful about ever seeing Spain again. In fact, reported the expedition's logbook, at one point late in the voyage Columbus faced down a near mutiny by his anxious men, encouraging them as best he could, "holding out high hopes of the gains they would make," and adding that it was useless to complain "because he had reached the [vicinity of] the Indies and must sail on until with the help of Our Lord he discovered land."[16]

Finally, on 12 October, after thirty-three days of sailing across open water (and ten days later than he had calculated), the admiral made his first landfall probably in the Bahamas, which he mistook as the outer islands of Japan. Going ashore on an island the native Taino inhabitants called Guanahani, but which the explorer rechristened San Salvador, Columbus raised the Spanish royal banner and claimed the land in the name of Isabella and Ferdinand. He also made his first contact with the indigenous people, whom he described in his logbook as handsome, well-proportioned, dark-skinned, and peaceful.

"They should be good servants," he added, "and very intelligent, for I have observed that they soon repeat anything that is said to them, and I believe that they would easily be made Christian, for they appeared to me to have no religion."[17] Though puzzled that none of the natives he encountered anywhere during the voyage resembled the medieval descriptions of the Chinese or Japanese, he nevertheless dubbed them "Indians" in the firm belief that he had reached the East Indies as anticipated.

For almost three months, Columbus explored the Caribbean in search of gold and spices, but he found none. Instead, he discovered the large island of Cuba, south of San Salvador, which was of particular interest. For if (he wrote), "I am to believe the indications of all these Indians and those I have on board—I do not know their language—this is the island of Cipangu [Japan] of which such marvelous tales are told, and which on the globes I have seen and the painted map of the world appears to lie in this region."[18] From Cuba, Columbus sailed east to another large island of which he also had learned and which he named Hispaniola (modern Haiti) in honor of Spain. Here, however, misfortune struck. On Christmas Eve, the *Santa Maria* foundered just off shore while Columbus slept in his cabin. With the flagship no longer seaworthy, its crew and cargo had to be transferred to land or to the two remaining vessels. Unable, however, to fit everyone aboard the *Niña* and *Pinta* when he sailed for home on 16 January 1493, Columbus left forty men behind at a small fort constructed from the timbers of the wrecked *Santa Maria*. Called La Navidad in commemoration, wrote Ferdinand, "of the day on which the admiral had escaped the perils of the sea and reached land to make the beginnings of their settlement,"[19] it was the first European colony established in the New World.

Columbus recrossed the Atlantic in the latitude of the Azores, battered by storms and high winds most of the way. One dark night during the height of the bad weather, his two ships became separated and only reunited back in Spain. Conditions were so severe, in fact, that when the tiny *Niña* reached the island of Santa Maria, alone and with the admiral aboard, the Portuguese residents expressed their astonishment at his escape from a tempest that had been blowing constantly for fifteen days. From the Azores, Columbus was driven by yet another storm to Lisbon. There he was received warmly by King John II who, a short time before, had rejected his Enterprise of the Indies, but who now listened with rapt attention to the explorer's detailed account of his discoveries. The Portuguese monarch then offered to be of service to Isabella and Ferdinand, but (wrote Ferdinand Columbus) he also remarked "that it seemed to him by

the treaty [of Alcaçovas-Toledo] that he had with the Sovereigns, the discovered lands belonged [properly] to him."[20] This claim led to one of the most significant international agreements of the late fifteenth century.

In the meantime, Columbus returned to Spain, arriving at the port of Palos on 13 March 1493. A month later, he was received at court to report on the success of his voyage. In the firm belief that he had discovered a western route to Asia, Columbus concluded that Cuba (which he had first mistaken for Cipangu and then for mainland Cathay because of its enormous size) and neighboring Hispaniola were outer islands belonging to China and Japan. Both places, he asserted, "are richer than I yet know or can say and I have taken possession of them in their Majesties' name and hold them all on their behalf and as completely at their disposal as the Kingdom of Castile."[21] To be sure, he had not found any of the silks, gemstones, spices, or other commodities so highly valued by Europeans and for which the Far East was famous. Nevertheless, he assured the Catholic monarchs that subsequent voyages would open up a rich and abundant trade in "as much gold as they require, . . . all the spices and cotton they want, . . . [and] as much aloes as they ask and as many slaves, who will be taken from the idolaters."[22] A degree of self-interest probably also lay behind the explorer's earnest contention that he had reached Asia as promised. For the list of demands he had presented to Isabella prior to his voyage depended upon his success. At all events, delighted by the results of his enterprise and the promise of great wealth to come, the queen and her consort accepted Columbus's word that he had reached Asia. Hence, in May they issued a new capitulation that confirmed the personal rewards he had been granted the previous year.

Concerned, in the meantime, to secure formal recognition of the newly discovered islands as Spanish possessions, and thus clear the way not only for their commercial exploitation but also for further territorial acquisition to the west, the Catholic monarchs opened negotiations with the pope in Rome and the Crown of Portugal to forestall any disputes. For if Columbus had reached the eastern outskirts of Asia, in fact, King John II had a legitimate claim to anything discovered there on the basis of the three papal bulls issued in the mid-1450s, which had granted a Portuguese monopoly in the region, and the subsequent Treaty of Alcaçovas-Toledo concluded with Spain in 1479. Hence, Isabella and Ferdinand lobbied for support from Pope Alexander VI (r. 1492–1503), a Spaniard by blood who was also obligated to the two sovereigns. In matters of religion that were so closely united to the motives for exploration,

only he could grant the exclusive right to spread the faith in a particular "heathen" area to one Christian community of Europe over another.[23] In two edicts issued in 1493, Alexander made a temporary ruling, based on a division of the world between Spain and Portugal along an imaginary line from north to south that lay 100 leagues (300–400 miles) west of the Azores and Cape Verde islands. All lands to the east of that line could be claimed by Portugal; all lands discovered to the west were reserved for Spain, "whether they be in regions occidental or meridional and oriental and of India."[24]

Although the decision established the Spanish Crown's basic legal claim to the islands discovered by Columbus in the Caribbean, it was just a preliminary to further negotiations with the Portuguese. Because of the pope's explicit reference to India, John II was especially concerned to restrict Spanish maritime activity by pushing it farther west where (he believed) it would be harmless, in order to reserve for Portugal as much of the south Atlantic as possible. Consequently, the king dropped his claim to the newly discovered islands, asking only that the pope's original demarcation line be moved 270 leagues (810 miles) farther west to safeguard Portugal's African interests. The Spanish monarchs agreed and, with both sides believing they had the better of the bargain, the Treaty of Tordesillas was duly signed in 1494. In reality, however, the agreement was a diplomatic coup for the Portuguese that confirmed their claim to the only known route to India, most of the south Atlantic, and, eventually, Brazil that bulged east of the line. One question remained unanswered, however. If the Tordesillas line extended completely around the earth, where did the different spheres of Spanish and Portuguese influence divide in Asia? That issue, which ultimately decided who possessed the highly prized but hotly contested spice islands of Indonesia, would not be resolved in favor of Portugal until 1529—seven years after the first circumnavigation of the globe was completed.

Initial Exploration of the New World: The Search for China Continues

As for Columbus, he made three additional voyages to the West Indies, still convinced that he had discovered a sea route to Asia's eastern rim. On the first of these expeditions in 1493, he led a fleet of seventeen ships with fifteen hundred sailors, churchmen, adventurers, and colonists aboard. Such was the level of interest and

enthusiasm that his discoveries the year before had excited in Spain. Sailing first to the makeshift settlement at La Navidad, Columbus found the fort a charred ruin and the men all dead or missing. Their fate is still unknown, but they were likely killed after quarreling with their native hosts or fell as casualties of intertribal warfare. Undaunted by the loss, Columbus put his colonists ashore at a new site several miles farther along the coast at a place he named La Isabella in honor of the queen of Castile. The colony never prospered. The ill-chosen site was both unprotected and unhealthy, while the unruly settlers were more than Columbus could control. By choice and temperament an explorer, he proved to be a poor governor and worse administrator, ill suited for his lofty responsibilities.

Having established the foundations of a new colony, the admiral continued his explorations in the Caribbean, discovering the islands of Dominica, Guadeloupe, Puerto Rico, and Jamaica. He then returned to Spain in early 1496 to report on his progress and respond to complaints by malcontents from La Isabella. During Columbus's absence, his brother and second in command, Bartolomeu, moved the struggling colony to a better site on Hispaniola's south coast. There, in 1496–1497, the settlers began construction of a new town, Santo Domingo, which was to serve as the capital of the Spanish West Indies for the next half century.

Columbus's third voyage of 1498–1500 was remarkable for three reasons. First was his discovery of Trinidad, which meant he had explored and claimed for Spain most of the islands belonging to the Greater and Lesser Antilles. Second, Columbus no longer believed that the earth's shape was spherical as, he wrote, "all authorities and the recorded experiments of Ptolemy and the rest . . . had constantly drawn and confirmed . . . , which they held to be true."[25] Instead, the explorer had reached the curious conclusion on the basis of irregularities he had seen over successive voyages that the world was pear-shaped, "or like a round ball, on part of which is something like a woman's nipple."[26] The third feature of the voyage was Columbus's arrest and transportation back to Spain in irons after a revolt by the colonists on Hispaniola. This fiasco provided the Spanish monarchs with the legal grounds they needed to strip the explorer of the titles and prerogatives granted to him in 1492. Long concerned that they had awarded Columbus too much power in the Indies, Isabella and Ferdinand swiftly replaced him as governor with a royal appointee.

Though released and permitted to make a fourth and final voyage, during which he reached the mainland of Central America for the first time, Columbus never regained the monarchs' lost favor.

Following his death in 1506, his family sought through legal means the restoration of the original hereditary rights and titles he had been granted by the Crown. The case was not resolved until 1536, however, when the newly formed Council of the Indies ruled that the late explorer's heirs were to renounce all their claims in exchange for an annual pension of ten thousand ducats and title to the Duchy of Veragua in Panama.

In a classic biography published in 1942, author Samuel Eliot Morison wrote of Christopher Columbus that he

> belonged to an age that was past, yet he became the sign and symbol of [a] new age of hope, glory and accomplishment. . . . In his faith, his deductive methods of reasoning, his unquestioning acceptance of the current ethics, Columbus was a man of the Middle Ages, and in the best sense. In his readiness to translate thought into action, in lively curiosity and accurate observation of natural phenomena, in his joyous sense of adventure and desire to win wealth and recognition, he was a modern man.[27]

That conception of modernity is problematic, however, and no more applies to Christopher Columbus than it does to Prince Henry "the Navigator," whom generations of historians have also tried to place in advance of his times. The simple truth is that Columbus was a thoroughly medieval man, whose fundamental motives, beliefs, and perspectives on the world were fashioned by the late medieval culture in which he lived. Even his pursuit of fame and fortune were molded by an age in which chivalric notions of great deeds continued to play a major role, and self-advancement focused on achieving noble status in the traditional social hierarchy of the day that no one challenged.

In other words, Columbus was no "Renaissance man" of vision; he was no forerunner of a new, more rational world or worldview who successfully broke with medieval myth and superstition, or whose voyages shattered the isolation and parochial outlook of contemporary Europeans. If that were the case, then medieval travelers such as Marco Polo and Portuguese explorers such as Vasco da Gama equally merit this distinction, because they possessed many of the same attributes. Instead, Columbus's vision was, like theirs, thoroughly traditional in character. In later years he even saw himself in religious terms as divinely ordained to help Christendom free the Holy Land from Muslim control and thought that his own trans-Atlantic voyages of exploration were a means to that sacred end.

This self-image is clear from the *Libro de las profecías* (*Book of Prophesies*) he composed in 1502–1503 after returning in chains

from his third expedition. This compilation of biblical passages was intended to inspire Ferdinand and Isabella to finance a fourth voyage under his command, in fulfillment of millennial prophecies of becoming monarchs of a New Jerusalem. Columbus adhered to the late medieval belief that the end of the world and the second coming of Jesus Christ were imminent (just 150 years away, he wrote). He was also convinced that God had made him the messenger of the new heaven and earth as foretold in the book of Revelation. The "Lord opened . . . my understanding (I could sense his hand upon me), so that it became clear that it was feasible to navigate from [Spain] to the Indies; and he unlocked within me the determination to execute the idea . . . to perform the clearest miracle in this [matter] of the voyage."[28] From Columbus's own perspective, therefore, his achievement was significant, even epochal, not because he ushered in a more modern rational age, but because his achievement heralded the near completion of the long history of the creation and redemption that would culminate in the conversion of all mankind to Christianity.

At the same time, when the explorer died in 1506, he was still convinced that his discoveries across the Atlantic belonged to Asia and were not part of a huge unknown continent lying between Europe and the Far East. With every successive voyage, however, and in the face of mounting evidence, it gradually became clear to many contemporaries that Columbus was mistaken and that he had stumbled, in fact, upon a whole new world. For some time, to be sure, the Spaniards continued to refer to their new islands in the Caribbean as the "Indies," which they identified with the East Indies, the source of spices, silks, and other valuable commodities. Even when these islands were recognized as outposts of a new landmass, their importance was initially overlooked. Only later did the full significance of Columbus's discoveries become clear when, as the news spread rapidly throughout Europe, other explorers and adventures from Spain, England, Portugal, and France sailed in his wake, inspired by his example.

In the meantime, the goal was still to find an easy westward passage to Asia, still thought by many to lie near the islands newly discovered by Columbus. Hence, in 1497, the Venetian navigator Giovanni Caboto (better known as John Cabot [1450–1498]) sailed from the English port of Bristol across the North Atlantic to a large island, which he named Newfoundland, and the coast of modern-day Nova Scotia. In the process, he stumbled upon the Grand Banks, where the shoals of cod were so dense that the current of swimming fish pushed his ship backward. Returning to England, Cabot claimed

to have reached the land of the Great Khan, and the following year King Henry VII (r. 1485–1509), who had commissioned the explorer's first voyage, authorized a second one to the area. But when that expedition failed to produce any precious goods or contact with the Chinese court, Henry lost interest in future exploration. Cabot's contribution to contemporary geographic knowledge was nonetheless significant. Though his achievement was not recognized immediately, he had rediscovered the North American continent five hundred years after the Vikings had first visited its shores.

At the turn of the sixteenth century, the Portuguese developed a brief interest in the same region, in the belief that it offered real possibilities. Thus, in 1500, Gaspar Corte-Real (ca. 1450–ca. 1501) sailed into northwest Atlantic waters toward Greenland, probably having heard of Cabot's claim to have found Cathay. Though prevented from cruising farther north along Greenland's shores by icebergs on this voyage, Corte-Real embarked on a second expedition with two ships the following year. This time, he crossed from Greenland to modern-day Labrador and then cruised down the coast to Newfoundland. There he captured a number of natives whom he sent back to Portugal aboard the second vessel, as he continued his voyage south. At that point, Corte-Real and his ship disappeared, their fate unknown. In 1501 and 1502, meanwhile, his fellow countryman, a farmer from the Azores named João Fernandes, sailed northwest under a royal patent from the king of Portugal, but also with backing from the Bristol merchants and approval from the English Crown. These expeditions added little to what John Cabot and Gaspar Corte-Real had found already, but the Portuguese word for someone of Fernandes's social status (*Labrador*) was given on his behalf first to Greenland and then to the region of Canada that now bears the name.[29]

Portuguese endeavors at this date met with greater success farther south, when Pedro Alvares Cabral accidentally landed at Brazil in 1500, after making a wide sweep into the Atlantic during an outward voyage to India via the Cape of Good Hope. Seeing that the territory lay to the east of the demarcation line established by the Treaty of Tordesillas signed six years before and, moreover, that it constituted newly discovered land, Brazil fell legally into Portugal's sphere of influence and belonged by right, therefore, to the Portuguese Crown.

Eager to ascertain the size of their new acquisition, the royal authorities at Lisbon dispatched an expedition of three ships in 1501. On board sailed the Florentine merchant Amerigo Vespucci (1451–1512), an amateur geographer, navigator, and explorer, who

had allegedly made an earlier voyage to the New World in 1499–1500 with the Spanish navigator Afonso de Ojeda (ca. 1465–1515) and the cartographer Juan de la Cosa (?–1501). Both men had served under Columbus in 1493. (Vespucci also claimed to have sailed with the great explorer at that time as a "commercial observer," but his story has never been corroborated.) The three ships reached the Americas separately, with Vespucci arriving on the coast of Brazil just south of the equator. He then supposedly explored the shoreline to the northwest, locating the mouth of the Amazon River, which he sailed part way up before turning back to rendezvous with Ojeda and De la Cosa. On returning to Spain in September 1500, Vespucci organized a follow-up expedition to Brazil that sailed in May 1501. Arriving at the northeasternmost point of South America, he headed southward to determine the extent of the mainland. On 1 January 1502 he entered a great natural harbor he named Rio de Janeiro in honor of New Year's Day, before continuing on to the mouth of the Rio de la Plata and down the Patagonian coast as far, he alleged, as 50° south latitude. If his claim is genuine, then the land he reportedly sighted in those waters might have been South Georgia Island, near the Antarctic Circle.

Although widely believed in his own time, Vespucci's claim is generally not accepted by modern scholars, who view the narratives he wrote of his other two voyages with equal skepticism. Ultimately, however, the authenticity of his accounts is irrelevant. What matters is that Vespucci's alleged explorations, combined with those of Cabot, Corte-Real, Ojeda, De la Cosa, and other navigators, increasingly demonstrated that what Columbus had found in the western Atlantic was not merely an outlying archipelago of China or Japan, but part of a vast unknown landmass of continental proportions that lay between Europe and the Far East by a western route. Vespucci's descriptions, contained in his published letters, were especially significant here. Not only was he among the first to comprehend this essential geographic fact and to understand, therefore, the broader implications of the early discoveries in the western hemisphere; he also coined the popular phrase "New World" to distinguish it from the "old" worlds of Europe, Africa, and Asia. For these reasons, the geographer Martin Waldseemüller—who printed Vespucci's letters in his *Introduction to Cosmography* (1507), along with updated maps of the world based upon information from the latest explorations—christened the new lands America, after the Latinized version of Vespucci's Christian name, Amerigo. The label was applied subsequently to the northern continent, as well, by Gerardus Mercator, when he published his world atlas in the 1580s. Since then, the two

continents of the western hemisphere have been known respectively as North America and South America.

Thus, in less than a century of maritime exploration, the whole shape of the world had changed, with momentous consequences for European expansion. Those kingdoms with access to the Atlantic Ocean now enjoyed commercial and colonial opportunities all but denied to the landlocked states of central Europe and the Mediterranean, which had hitherto dominated trade with the East. Already, tiny Portugal had begun to exploit its naval advantage in maritime Asia, where it soon established a trading post empire based on control of the sea lanes. Meanwhile, those who followed in Columbus's wake laid the foundation for Spain's vast colonial possessions in the New World. Recognizing the abundant opportunities offered by the American continents and Caribbean islands for entrepreneurs or those who sought a fresh start in life elsewhere, between 1493 and 1600 an estimated 200,000 Spaniards immigrated to the New World. With them came conquistadors like Hernán Cortés and Francisco Pizzaro who, with small forces at their back, subdued the great Aztec and Inca Empires, while acquiring fame and fortune for themselves. Inspired by their example and hoping for similar achievements by force of arms, other adventurers met with less success but in the course of their journeys explored much of the American interior. In due time, these commercial, colonial, and military ventures led to the growth of major new trading networks that linked the old world with the new.

Notes

1. Charles R. Boxer, *The Portuguese Seaborne Empire, 1415–1825* (London: Hitchinson & Co., 1969), 1–2.

2. "Epistle to the most noble Prince and Catholick king, Charles, Peter Martyr of Angleria wisheth perpetual felicity," October 1516, in Pietro Martire d'Anghiera, *The Decades of the Newe Worlde or West India*, Richard Eden, trans. ([New York]: Readex Microprint, 1966), n.p.

3. Quoted in Boxer, *Portuguese Seaborne Empire*, 1.

4. Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Chicago: Encyclopedia Britannica, 1952), Book 4, Chapter 7 "Of Colonies," Part 3, 271.

5. Benjamin Keen, trans. and ed., *The Life of the Admiral Christopher Columbus by His Son Ferdinand* (New Brunswick, NJ: Rutgers University Press, 1959; reissued 1992), 14. Cited hereafter as Ferdinand Columbus.

6. Ibid.

7. "Cipangu" was the name given by Polo to the Japanese archipelago, which he described from rumors heard in China, but never visited.

8. Ferdinand Columbus, 18–19.

9. Ibid., 15.

10. Ibid., 35. "To covenant": to sign an agreement or contract.

11. Ibid.

12. See Washington Irving, *The Life and Voyages of Christopher Columbus*, John H. McElroy, ed. (Boston: Twayne, 1981), Book 2, Chapter 3, 47–53.

13. Gonzalo Fernández de Oviedo, *General and Natural History of the Indies*, excerpted in *The Four Voyages of Christopher Columbus*, J. M. Cohen, trans. and ed. (London: Penguin, 1969), 36.

14. Ferdinand Columbus, 42.

15. Granada Capitulations, 30 April 1492, in *The Book of Privileges Issued to Christopher Columbus by King Ferdinand and Queen Isabel, 1492–1502*, Helen Nader, trans. and ed., in vol. 2 of the *Repertorium Columbianum*, Geoffrey Simcox, gen. ed. (Berkeley: University of California Press, 1996), 67.

16. "Digest of Columbus's Log-Book on His First Voyage, Made by Bartolomé de las Casas," in Cohen, ed., *Four Voyages of Columbus*, 51.

17. Ibid., 56.

18. Ibid., 73.

19. Ferdinand Columbus, 86.

20. Ibid., 99.

21. Letter of Columbus to various persons describing the results of his first voyage and written on the return voyage, in Cohen, ed., *Four Voyages of Columbus*, 130.

22. Ibid., 122.

23. John H. Parry, *The Spanish Seaborne Empire* (London: Hutchinson, 1966), 45–46.

24. For the full text of the papal decree, see Nader, *Book of Privileges*, 93–98.

25. "Narrative of the Third Voyage of Christopher Columbus to the Indies, in which he discovered the mainland, Dispatched to the Sovereigns from the Island of Hispaniola," in Cohen, ed., *Four Voyages of Columbus*, 217.

26. Ibid., 218.

27. Samuel Eliot Morison, *Admiral of the Ocean Sea: A Life of Christopher Columbus* (Boston: Little, Brown, 1942), 5–6.

28. Kay Brigham, trans., *Christopher Columbus's Book of Prophesies* (Barcelona: Libros CLIE, 1992), 178–179.

29. Boies Penrose, *Travel and Discovery in the Renaissance, 1420–1620* (Cambridge, MA: Harvard University Press, 1960), 144.

CHAPTER 4

CIRCUMNAVIGATION AND THE SEARCH FOR A NORTHERN PASSAGE TO CHINA

At the threshold of the sixteenth century, two urgent matters confronted the Spanish monarchy in the Americas. One was the need to secure possession of its recent acquisitions in the Caribbean by means of colonization and the imposition of royal authority through the establishment of settled colonial administration. The second was the need to determine the geographic extent of the lands and islands that composed the New World, whose continental proportions were still a subject of speculation in 1500, but with a specific view to continuing the search for a viable westward sea route to Asia and its markets. To be sure, within a short time following Columbus's initial voyages of 1492 and 1493, some observers had begun to doubt his claim to have reached the westernmost islands of the Far East. Most contemporaries were not yet so skeptical, however. The subsequent explorations of John Cabot for England and Gaspar Corte Real for Portugal to the shores of what later became identified as North America were both undertaken with the same objective as that of Columbus. Their common purpose was to find a way to Cathay. The principal goal of Columbus's last two voyages was a similar search for Asia, however haphazard, in his enduring belief that it lay close to the Antilles.

As time passed and the geographic evidence mounted from these early explorations across the Atlantic, however, it became increasingly clear that a great landmass, unknown hitherto, blocked the route of anyone who would sail farther west. Thus began the

systematic hunt for a westward passage either through or around the Americas, perhaps as early as 1505, though certainly by 1510, which superceded the earlier search for the East Indies in the Americas themselves. That new quest consisted, moreover, of two independent lines of advance, one pursued by Spanish mariners, the other pursued by Spain's English, French, and Dutch rivals. First was the discovery, if possible, of a navigable strait through the American continents westward or southward of the Caribbean islands. Second was the search for a passage somewhere in the north Atlantic, beyond the limits of Spain's New World possessions. It was consequently on the race to find such a sea route through Arctic waters, whether to the northwest around the American continents or to the northeast around the top of Russia, that much of the exploring activity during the later sixteenth century focused.

That activity was prompted further, meanwhile, by the Spanish Crown's interest in colonizing the Caribbean islands it already possessed under effective royal authority and its ambition to acquire additional territories by means of exploration and conquest on the American mainland. Following the chaotic administration of La Isabella under Christopher Columbus and the struggling colony's removal to a healthier location on the island of Hispaniola by his brother Bartholomew, effective government in the Spanish West Indies began in 1502 with Frey Nicolás de Ovando, who arrived in command of thirty ships and twenty-five hundred more people to reinforce the three hundred surviving settlers. An experienced soldier and strong disciplinarian, the new governor tamed the unruly colonists from the outset of his administration, forcing them to build proper houses, plant crops, and raise livestock to support themselves. At the same time, he extracted from the native Taino people tribute payments in produce and forced labor under a *repartimiento* (also called *encomienda*) system, inaugurated by Columbus. As a result of his stern direction, during the six years of Ovando's governorship the fledgling colony was established on a firm foundation, began to flourish, and soon enjoyed a modest prosperity.[1]

Hispaniola also served as a base of operations and supply, meanwhile, for further exploration of the Caribbean islands and the mainland coasts. Already in 1499, for example, separate expeditions under Vincent Yàñez Pinzón (former commander of the *Pinta*) and Afonso de Ojeda (with Amerigo Vespucci aboard) had sailed from the colony along the shores of Venezuela, Guiana, and northern Brazil. A subsequent third exploration of the Venezuelan coast discovered rich pearl fisheries near modern Maracaibo, which prompted the establishment of a settlement at New Cadiz on the island of

Cubagna to exploit that source of wealth. In 1500, Rodrigo de Bastidas (1460–1526) visited the shores of the Gulf of Darién off present-day Colombia, followed two years later by Juan de la Cosa's more thorough exploration of the same area. In 1502, Christopher Columbus similarly sailed from Hispaniola on his fourth voyage, during which he coasted Honduras, Costa Rica, and the narrow Isthmus of Panama, where attempts to found colonies in 1509 at Veragua—the Columbus family's only mainland possession after the explorer's death—and on the northern coast of Colombia failed miserably. Still other expeditions originating from Spain's colonial outpost on Hispaniola focused on the islands of Jamaica (1509) and Cuba (1511), both of which were quickly wrested from their native inhabitants and settled successfully.

Undaunted by the failure to colonize Veragua and northern Colombia, a further expedition sailed in 1510 to the Gulf of Uraba at the lower end of the Isthmus of Panama. Although a different commander had been appointed initially, the real leadership was provided by a popular desperado, bankrupt, and stowaway on the voyage named Vasco Nuñez Balboa (1475–1519), who had accompanied Bastidas to the region in 1500. Described as a charismatic, decisive, and able, though unscrupulous, and irreverent man and the first of the great conquistadores who won Spain's American empire,[2] Balboa directed the new expedition to the western side of the Gulf of Uraba, where he founded the colony of Santa Maria de la Antigua del Darién, the first permanent European settlement on the mainland of the Americas. After consolidating his authority over the small colony under commission from the Spanish Crown as interim governor and captain general of Darién (as Panama was then called), Balboa entered the interior, where he soon subdued the native inhabitants. He defeated local resistance, formed useful alliances with native chieftains, and generally enlarged the settlement of Santa Maria. In the process, he heard reports of tribes to the south and west that possessed great wealth—a reference probably to the Incas, whose empire in Peru would be overthrown by Balboa's chief lieutenant, Francisco Pizarro, in 1530–1535. At the same time, rumors circulated of a great sea that lay on the farther side of the Sierra de Quaraca Mountains.

Eager to locate that sea and acquire gold along the way—"For hunger of gold," wrote the chronicler Pietro Martire d'Anghiera in 1516, "did nonetheless encourage our men to adventure these perils and labours [more] than did the possessing of the lands"[3]—Balboa set out from Santa Maria in September 1513 with two hundred Spaniards and one thousand Indians. The mixed force crossed the

lower part of Panama, through dense jungle and over rugged mountains, to the opposite side of the isthmus. There, on 25 September from a hilltop he had climbed alone to obtain an unobstructed view, Balboa became the first European to gaze upon the Pacific Ocean from the western coast of the New World. "Great was his joy," recounted Pietro Martire three years after the event, "and in the presence of the natives he took possession, in the name of ... Castile, of all that sea and the countries bordering on it."[4]

The Search for a Strait

Balboa's discovery was enormously significant for the history of maritime exploration and developing notions of American geography. It not only confirmed the existence of the great South Sea (so-called because it appeared to lie south of the middle isthmus), of which the Spaniards had heard only vague rumors to date but also revealed the narrow breadth of land that seemed to divide the Atlantic from the newly found Pacific. This intelligence inspired renewed hope that a strait could be found through the isthmus to complete a westward, all-sea route to Asia under Spanish control, which remained a primary goal of the royal authorities back in Madrid. For until the continental proportions of the New World were established fully by subsequent voyages, many contemporaries (wrote Pietro Martire) were no less convinced than Columbus had been that "certain large straits or entrances ... should pass through the [lands] lying on the west side of the Island of Cuba."[5] It was simply a matter of finding them.

Hence, while some Spaniards began to exploit opportunities in the Americas themselves at this time, whether by settlement, exploration, or conquest on the mainland, for the moment most continued to seek a viable western route to the Far East somewhere through the New World. Their motives were obvious. On the one hand, explained Pietro Martire, these adventurers were "devoured by such a passion to discover this strait that they risk a thousand dangers; for it is certain that he who does discover it—if ever it is discovered—will obtain the imperial favour, not to mention great authority" and personal riches. On the other hand, continued Martire, national interests were also at stake; for "if, indeed, a passage between the South and the North [i.e., Atlantic] Seas is discovered, the route to the islands producing spices and precious stones will be very much shortened, and the dispute begun with Portugal [in 1494] ... will be eliminated" by a Spanish victory in the race to

reach the spice markets of the Far East.[6] Although the Spaniards did not yet know it, that competition had already been won by their rivals in 1513, when the first Portuguese ships reached the spice-producing islands of the Moluccas—the same year that Balboa crossed the Isthmus of Panama to sight the Pacific Ocean on the other side.

Until that outcome was confirmed, however, the hope of finding a passage through the New World encouraged further exploration along the Caribbean coasts of Central America by Spanish mariners and, as soon as boats could be built, of the Pacific coasts, as well. When, for example, Balboa led another expedition across Panama in 1516, he had the parts of disassembled ships hauled across the isthmus to the Gulf of San Miguel. Once there, the vessels were reconstructed and launched to begin exploration of Panama's Pacific shores. Even after Balboa's arrest and execution on false charges of treason in 1519, exploration of the "South Sea" coast continued under other captains who competed with each other to discover the much-desired mystery of the strait. Similar attention was directed, meanwhile, to the Caribbean side of Central America, which was explored by three successive expeditions in 1516, 1517, and 1519, all sent from Cuba. Although a western passage was not found, at least the northern rim of the Gulf of Mexico was traced, while the mouth of the Mississippi River was probably discovered and partially explored.

A concurrent search for the elusive strait was also carried on by land. In 1513, Juan Ponce de León (1460–1521), a veteran of Columbus's second voyage and subsequent Spanish settlement of the West Indies, had landed on the "island" of Bimini. This region likely corresponded to the southernmost part of Florida, which Ponce de León had renamed in honor of Easter Sunday (Pasqua Florida), the day that he claimed the territory for Spain. According to a romantic tradition first reported by Pietro Martire with due skepticism, this enterprise had been inspired by native tales that there existed on Bimini "a continual spring of running water of such marvelous virtue, that the water thereof being drunk, perhaps with some diet, maketh old men young again."[7] In reality, Ponce de León held a royal commission to search for Bimini, then conquer and colonize it. For six months, he explored both coasts of the Florida peninsula by sea, perhaps as far north as present-day Sarasota on the Gulf of Mexico side and the Okefenokee Swamp on the Atlantic side, before returning to Puerto Rico. In 1521, Ponce de León led a second expedition to the same area, with the dual intention of planting a colony and ascertaining whether Florida was an island, in fact, or part of

the mainland. Like the earlier voyage, the goal was also to find a strait, if possible, from the Atlantic to the Pacific. But after five months of fruitless effort and repeated Indian attacks, during one of which the explorer was mortally wounded, the attempt to colonize Florida was abandoned and the survivors sailed back to Cuba, where Ponce de León died.

In the meantime, two expeditions of great significance to the establishment of Spain's empire in the New World and the discovery of a western passage to Asia set out in 1519, one on land and the other by sea. In that year, Ferdinand Magellan (1480–1521) embarked from the Spanish port of Sanlúcar on what would become the first circumnavigation of the globe, and Hernán Cortés (1485–1547) landed on the shores of Mexico to begin the conquest of the Aztec Empire, completed two years later. Although the search for a strait that linked the Atlantic to the Pacific was not originally part of Cortés's plans, he believed that one actually existed and turned part of his attention to finding it, once the Aztecs had been defeated. His efforts were reported in the last three of his five famous letters to Holy Roman Emperor Charles V (also king of a united Spain since 1516), in which the great conquistador made interesting references to a western passage.

For some time already, wrote Cortés in his third letter dated 15 May 1522, he had heard accounts of the South Sea, adding that once a route to it had been discovered through, across, or around the mainland, "we shall find many islands rich in gold, pearls, precious stones and spices, and many wonderful and unknown things will be disclosed to us."[8] His comments reflect the still general belief that the Pacific, recently sighted from Panama by Balboa, was the eastern portion of the Indian Ocean. In his mind, and that of most contemporaries, this sea was not confined to its actual limits in Asia, but rather thought of as extending far eastward past the Moluccas. If that were true and Columbus were proved correct after all, then the spice-producing islands of the East lay just west of Spain's expanding colony in Central America. Not until January 1524, however, did Cortés dispatch an expedition of six ships under the command of Cristobal de Olid to explore the coast of Yucatan toward Darién in search of the hoped for strait—"the one thing in the world which I want to discover," wrote the conquistador to Emperor Charles, "because of the great service which I am certain Your Caesarian Majesty will receive thereby."[9]

Although no passage was located on this occasion, in his fourth letter, written on 15 October the same year, Cortés urged that the search continue and that new expeditions "investigate the

unexplored coast between the Pánuco River [in modern Mexico] and the coast of Florida, which was discovered by ... Juan Ponce de León, ... northwards to Los Bacollaos [the Bahamas], for it is believed that there is on that coast a strait leading to the South Sea." He advised that similar expeditions be sent along Panama's Pacific shores in the firm conviction that a westward passage "cannot escape those who go by the South Sea and those who go by the Northern [sea].... Thus on one coast or the other they cannot fail to discover it."[10] Such a find, argued Cortés further, would open a more favorable and far shorter all-Spanish ocean route to Asia than that found recently by Magellan, whose achievement was familiar to, and envied by, the conqueror of Mexico.

The World Encompassed

Although his name is most closely associated with the first circumnavigation of the globe, that outcome was not part of Magellan's original plan. Also ironic is that he himself never completed the voyage. He died in 1521 while fighting the enemy forces of a native ally on the Philippines Islands. So the real distinction of being first to sail around the world belongs to the eighteen ill and starving survivors of the expedition, who limped back to Spain a year after Magellan's death. Yet Magellan can be credited exclusively with one major achievement. However vague his initial motives might have been for personal wealth or reputation, he found the long-sought strait through the New World that bears his name and completed Columbus's dream of sailing west to reach the East. But his voyage discovered more than an uninterrupted western sea route to Asia. It revealed not only the daunting expanse of the Pacific Ocean at which no European had even guessed, thus destroying the myth that fabled Cathay lay just beyond the horizon from the Americas, but also that Portugal—not Spain—had won the maritime race to possess the much-coveted spice islands of the East Indies.

A Portuguese by birth and nationality, Ferdinand Magellan was already familiar with Asia from personal experience, having served from 1505 to 1512 in Indian waters under Francisco de Almeida, Afonso de Albuquerque, and other notable commanders. During that period, he had participated in the naval actions against Diu, Goa, and Calicut. Two years after Albuquerque's unsuccessful first attempt to seize the strategic Malayan port city of Malacca (1508–1509), Magellan had accompanied an expedition to the spice-producing Moluccas of present-day Indonesia. There, on the island of Ternate,

relations were established with the native Muslim ruler in 1511 and a fortified factory built soon after. On his return to Portugal in 1512, Magellan had been ennobled and promoted to the captaincy as well, though despite his subsequent gallantry fighting against the Moors in Morocco he lost favor with King Manual I, reputedly for his role in an unauthorized sale of cattle to the enemy. Retreating in disgrace to Lisbon, Magellan tried next to secure royal support for a proposed expedition to exploit the spice trade in the Moluccas. When his appeal failed, he left Portugal in 1517 and offered both his services and his new plan to Spain.

Inspired by letters received from Francisco Serrão, an old friend and comrade in arms living on Ternate, Magellan became convinced that some of the spice islands not yet seized by the Portuguese actually lay in the geographic zone assigned to Castile by the 1494 Treaty of Tordesillas. In the meantime, Magellan had also heard reports from Portuguese mariners who had sailed near the Ryuku Islands north of Formosa (modern Taiwan) and had returned with embellished tales of great riches and civilization. Not only did Magellan accept these tales as genuine; he came to identify the Ryukus somehow with Old Testament references to Tarshish and Orphir, from which the treasure-laden ships of Solomon and Hiram of Tyre had brought back their fabulous wealth. The problem, however, was to reach these Asian isles by some western sea route without trespassing on Portugal's monopoly claim to the eastern hemisphere established at Tordesillas.

The solution was straightforward. Like his contemporaries, Magellan believed that the Indian Ocean extended past the Moluccas, and that the spice islands themselves lay just west of Panama. He further accepted the prevailing theory that a transoceanic strait through the New World linked the Atlantic to the Pacific. That passage had not yet been found. Moreover, successive Spanish explorations on both land and sea, from Florida and Mexico in the north to Darién in the south, had begun to expose the continental proportions of the Americas, thought by many until now to consist chiefly of islands instead of a single, continuous landmass. Pietro Martire noted the revision of his own thinking in this regard when, after careful scrutiny of available maps and reports, including the letters of Amerigo Vespucci, he concluded that the mainland "reacheth forth into the sea even as doth Italy. . . . But I now compare a pigmy or a dwarf to a giant, for that part thereof which the Spaniards have [so far] over run [i.e., explored] . . . is more than eight times longer than Italy."[11] Yet its southern extremity still remained undiscovered. On a positive note, however, many of Martire's sources also indicated

that the American shoreline curved continuously southwestward from Brazil and the Rio de la Plata. This information led Magellan to speculate that somewhere farther to the south the continent was divided by a strait, providing the long-sought westward passage to the Far East.

Although the cautious Spanish officials to whom Magellan initially proposed the new expedition hesitated to endorse it, the young king-emperor Charles V was intrigued by the ambitious scheme and agreed to back it. Five ships were provided for the venture, along with a crew of 250 men, many of whom were Portuguese because Magellan mistrusted Spanish seamanship. Also accompanying the voyage was a volunteer Italian nobleman named Antonio Pigafetta (1491–1535), who became its unofficial chronicler. But not until the small fleet had sailed from the Spanish port of Sanlúcar on 20 September 1519—almost six months to the day after Cortés had landed on the coast of Mexico—did Magellan distribute maps to his captains or (recalled Pigafetta) "wholly declare the voyage which he wished to make, lest the [officers and crew] refuse to accompany him on so long a voyage as he had in mind to undertake, in view of the great and violent storms of the Ocean Sea whither he would go."[12]

After an uneventful Atlantic crossing, Magellan and his fleet sailed along the familiar coastal regions of South America from Brazil to the Rio de la Plata, exploring the shores, charting the currents, and searching for the strait that contemporary Europeans felt certain existed. Pigafetta took copious notes of everything he saw, meanwhile, from the flora and fauna to the native peoples encountered by the expedition on land, recording what he could of their appearance, customs, modes of living, and language. With the onset of the southern hemisphere's winter season, however, the fleet was forced to interrupt its southern progress and anchor in a bay along the coast of Patagonia (Land of Big Feet) in present-day Argentina. Magellan named the region after the local inhabitants, who not only appeared to be of greater stature than Europeans, but who also wore enormous footgear. (This fact alone suggests that Vespucci had not sailed so far south as he claimed; otherwise, he might have named the region himself.) Over the next five months, Magellan endeavored to keep his men occupied and out of trouble. But dissension slowly mounted among many officers and seamen who resented their Portuguese commander. Pigafetta attributed their animosity to national pride and the intense ill will that the Castilians and Portuguese felt for each other. At all events, dissension soon turned into resistance, and Magellan was forced to quell a mutiny. He restored order by punishing the ringleaders while pardoning their followers, which regained

the crews' obedience. Nor was this the only mishap that the expedition experienced during its winter layover. One of the ships was wrecked not long after the attempted mutiny while surveying the Patagonian shoreline.

With his four remaining vessels, Magellan resumed his voyage before the end of winter. Finally, on 21 October 1520 he sighted a strait, separating Tierra del Fuego (Land of Fire) from the mainland, which now bears his name. Over the next thirty-eight days, the small fleet negotiated its hazardous waters. Part way through, however, Magellan lost a second ship, when the frightened crew mutinied and returned to Spain. But still he persisted and on 28 November reached the western end of the passage. There he entered a sea so calm in contrast to the turbulence encountered in the narrow strait he had just navigated that he named it the "Pacific." Then turning northward, Magellan probed the west coast of South America in search of favorable winds and currents that could carry him across the ocean in full expectation of reaching the Moluccas before long. Though his exact route is unknown, because he sighted land only once, his path clearly took him north of the numerous islands of Polynesia and Melanesia that litter the South Pacific.

The voyage to Asia was an exercise in endurance that lasted far longer than Magellan had anticipated. It also represented a supreme accomplishment of seamanship in the Age of Discovery. The journey lasted nearly four months, from the day the small fleet left the western shores of South America in December 1520 to the day it reached the Mariana Islands in early March 1521. During the long passage, food supplies and freshwater diminished on board Magellan's three ships. "We ate biscuit, which was no long[er] biscuit," related Antonio Pigafetta, "but powder of biscuits swarming with worms, for they had eaten the good. It stank strongly of the urine of rats. We drank water that had been putrid for days."[13] Eventually, the sailors resorted to eating boiled leather, as well as sawdust and rats that sold for the princely sum of half a ducat apiece, when the men could trap them. In the wake of this privation followed scurvy, from which the crews began to sicken and die. This dreaded disease, the result of prolonged vitamin C deficiency, causes painful rotting of its victim's gums, tooth loss, abscesses, hemorrhaging, physical weakness, lethargy, and finally death if not treated in time. Altogether, the illness killed nineteen of Magellan's crewmen and afflicted another twenty-nine.

Landing on Guam in the Marianas at last, the malnourished fleet took on fresh supplies and then continued its westward search for the Moluccas. Magellan was unaware that he was too far north of the spice islands' latitude and, after ten days of sailing, discovered

the Philippines instead. After a brief exploration of one or two islands in the archipelago, he anchored at Cebu, where he gained the confidence of the native inhabitants and converted their ruler to Christianity. At this point, Magellan made the fateful decision to support his new Asian ally in a military campaign against the neighboring island of Mactan. During the fighting on 27 April 1521, the explorer was killed with forty of his men.

With the Spanish fleet now severely shorthanded, the decision was made to burn one of the three remaining ships, and then to sail for Tidore (near Ternate) in the Moluccas under the command of Juan Sebastian del Cano (ca. 1487–1526). On arrival, they learned that a Portuguese squadron was approaching. To avoid capture, Del Cano loaded a cargo of spices aboard his ship, the *Victoria*, and departed for Spain via the Cape of Good Hope. The other surviving vessel was not so lucky. Having tried unsuccessfully to recross the Pacific, it turned back only to be seized by the hostile Portuguese. After a harrowing homeward voyage, meanwhile, the *Victoria* finally limped into harbor at Sanlúcar on 6 September 1522, the sole vessel of Magellan's original five to complete the first circumnavigation of the globe. Aboard were just 18 survivors of the initial 250 men who had sailed from Spain three years before, including Antonio Pigafetta who later published his journal of the voyage. Another 17 crewmen, either stranded in Asia or released by their Portuguese captors, returned subsequently by other routes, so that a total of 35 survivors reached home, at last.

Although Ferdinand Magellan died before finishing the historic voyage he had initiated, his contribution to contemporary knowledge of world geography was profound. To begin with, since the ancient Greek mathematician Pythagoras, Europeans had known the earth to be spherical in shape, though for a long time that understanding remained theoretical in some respects. Yet it was on this important geographic premise that Christopher Columbus and other early explorers had embarked upon their voyages of discovery, fully confident that it was possible to sail *around* the world to reach China. Now Magellan, or at least his single remaining ship, the *Victoria*, had provided a concrete demonstration that the earth was spherical in fact and not just in theory. The results of the voyage also made it possible for Europeans to form a more accurate notion, however dim at this early period, of the real ratio of land to water on the globe's surface.

Magellan's expedition had similarly proved that the earth's oceans were interconnected, including the Indian Ocean, which had been thought to be a landlocked sea—much like the

Mediterranean—since the days of Ptolemy in the first century A.D. This realization opened the way for Europeans, European culture, and European power to infiltrate every quarter of the globe. The circumnavigation had also revealed the vastness of the Pacific and established a route across it, though for many years to come Europeans would not entirely abandon Ptolemaic geography. They continued to think of the Pacific as an eastern extension of the Indian Ocean, and until the voyages of Vitus Bering in the eighteenth century proved them wrong, their maps still showed the Asian landmass joining the Americas not far north of where Magellan had crossed the Pacific. As for the Americas themselves, Magellan's exploration of the east and west coasts of the southern continent enabled European geographers to determine its dimensions more fully and more accurately.

Finally, the first circumnavigation of the globe settled the enduring controversy over the Moluccas, and whether these islands lay within the Spanish or Portuguese zones negotiated at Tordesillas in 1494. Within twelve months of the *Victoria*'s return, the Conference of Badajoz (1523–1524) met to resolve the issue between the two kingdoms but failed to reach a consensus. Over the next few years, the Spaniards actively renewed their efforts to discover an easier and more convenient route to the Far East than that found by Magellan, as well as one that would pass only through the Spanish zone.

This interest prompted a succession of expeditions, starting in 1524–1525 when Estavão Gomez (ca. 1474–ca. 1538) was sent north to find a western passage. A Portuguese by birth, he had originally sailed with Magellan in 1519 but had been aboard the ship that deserted the fleet and returned to Spain part way through the South American strait discovered by the explorer. Still in Spanish service, Gomez looked in vain for a western passage between the Bahamas and Florida as far, perhaps, as the Penobscot River in present-day Maine before returning to Europe after ten months. In 1526, Hernán Cortés wrote that he, too, was continuing the search for a strait by land, in order (wrote his secretary and biography, Francisco López de Gómara) "to remove [the cause] of the conflict with Portugal over the Spice Islands," while Lucas Vásquez de Ayllón was sent by sea to investigate the American coastline north of the island of Santo Domingo for the same purpose.[14] Both efforts ended in failure, however, along with de Ayllón's own death from fever. Also in 1526, John Cabot's son Sebastian, who had entered Spain's service in 1516, was dispatched with four ships and two hundred men to explore the Plate River estuary, which some thought was the key to the Pacific. Though

the estuary was examined, along with the Parana and Paraguay Rivers, the expedition was beset by native attacks, disease, hardship, and discipline problems, and finally returned to Spain in 1529 with only twenty-four survivors.

Under the circumstances, Spain was compelled to admit defeat in the rivalry with Portugal over possession of the spice islands. By the Treaty of Zaragoza signed in 1529, the Spanish Crown formally acknowledged that the Moluccas lay within the sphere of Portugal's maritime empire in Asia, in return for an indemnity payment of 350,000 ducats. The treaty also laid the foundation for Spanish colonization of the Philippines after 1564 and gave the kingdom uncontested mastery of the Pacific Ocean for much of the sixteenth century. Thereafter, the Spanish Crown concentrated its energies on expanding its territorial possessions in Central and South America, from which it had begun already to derive unexpected riches.

The Search for a Northern Passage

The Treaty of Zaragoza brought to an end what may be regarded as the prologue to the Age of Discovery. The world was divided into separate zones claimed by Portugal and Spain. But these claims were theoretical, at best, for both maritime powers had only modest settlements overseas to confirm their ownership. Consequently, France, then England and the United Provinces (the Dutch Netherlands) began to demand a share in a way that challenged Portuguese and Spanish claims to the monopoly of trade and territorial acquisition, whether in Asia or the Americas, on a principle enunciated by contemporary Englishmen, that "prescription without possession availeth nothing."

The developing competition focused on three major arenas. One, of course, was the Far East, though it would not be for a century or more that France, England, or the United Provinces could accumulate the formidable concentration of naval strength and financial resources needed to defeat the Spanish and Portuguese forces overseas, or seize and hold their outposts in maritime Asia. The other two arenas were associated with the Atlantic New World. First was the Caribbean, where Spanish occupation of the major island groups that composed the Greater and Lesser Antilles had left hundreds of smaller ones unoccupied or unclaimed. Scattered mostly along the Atlantic fringe, these islands soon attracted English, French, and Dutch interest because of their strategic location as potential bases from which to trade in contraband goods with

Spanish settlers in violation of Spanish law, raid Spanish colonies when the opportunity arose, or plunder Spanish shipping homeward bound with cargoes of produce and treasure. Eventually, Spain's rivals established permanent outposts of their own, to serve as settlements producing tropical crops (e.g., sugar, indigo, etc.) for export to Europe, as well as naval bases and commercial depots in the trans-Atlantic trade. In a very short time, these colonial possessions also became objects of European diplomacy and warfare, now conducted on a global scale.

The second focus of competition in the New World was that huge and unknown portion of the newly discovered North American continent that stretched along the Atlantic seaboard. A vast region of uncertain geographic boundaries, its southern portion was labeled vaguely by the Spaniards as La Florida. The name was understood generally by contemporaries to encompass the whole territory extending from the Atlantic coast inland to modern-day New Mexico, and from the Gulf of Mexico indefinitely northward to the Carolinas, stretching as far perhaps as the Arctic Ocean where English and Portuguese mariners had started to direct some attention.

It is nonetheless curious, wrote historian Boies Penrose in 1960, that when compared with Central and South America,

> the area encompassed in the present-day United States and Canada had but a meager history in the annals of Renaissance exploration. There were doubtless several reasons for this; the climate was harsher, the eastern half of the continent was clothed in an impenetrable primeval forest, precious metals were not readily accessible, the natives were ignorant and savage, and there were no wealthy empires such as those of the Incas and Aztecs. All these factors combined to make the North American continent a relative backwater during the sixteenth century as far as discovery and colonization were concerned.[15]

Though subsequent scholars have reassessed some of the conditions described by Penrose, two more should be added to his list. One is that for the maritime kingdoms of northern Europe, it was in some respects easier to occupy the smaller, unclaimed Caribbean islands or to raid Spanish shipping lanes and settlements already established. At this early stage, neither action required the intense allocation of national resources needed to break Spain's grip on trade or territory that became characteristic of the European competition for empire during the late seventeenth and eighteenth centuries. The second is that for most Europeans, even those eventually engaged in

exploration and colonization of North America, Asia and its wealth remained the great prize far into the nineteenth-century Age of Imperialism. These reasons explain the search in earnest during much of the 1500s for a northern passage around the North American continent, outside the immediate range of Spanish might or territorial claims.

The quest for just such a passage dates from 1509, when Sebastian Cabot (ca. 1476–1557), son of the Genoese discoverer of Newfoundland, sailed to the northeast coast of North America under sponsorship from the same Bristol merchants who had financed his father's two earlier voyages. By that time, the explorations of the older Cabot, Columbus, and his near successors, including Amerigo Vespucci, had been documented in maps published by Martin Waldseemüller in 1507. Although the full contours of the Americas were not yet known and their continental proportions remained a matter of conjecture, the new charts indicated a large southern landmass between Europe and the Far East, but separated from Asia by a sea to the west. This concept was entirely new to Europe, where the prevailing geographic wisdom was that the so-called New World was merely an eastern extension of the East Indies. At all events, Sebastian Cabot's goal in 1509 was to locate a westward water route north of that landmass, which made his voyage the earliest real effort to find a Northwest Passage.

It was a bold attempt, for Cabot not only explored the coasts of Newfoundland and Labrador; he also reached the latitude of 67° north, just inside the Arctic circle, and might even have entered Hudson Strait and the eastern portion of Hudson Bay. According to his own account, he believed this section of the Atlantic to be the western sea indicated on Waldseemüller's maps, but he was prevented from sailing any farther by ice and a mutinous crew anxious to go home. On the return voyage, the explorer claimed to have sighted the coasts of modern-day Nova Scotia and Long Island, too, but this is uncertain. For his recollections of the expedition recounted in old age had so confused his voyage of 1509 with that of his father in 1497–1498 that modern geographers have been unable to sort out the details with absolute accuracy. Yet, Sebastian Cabot's achievement was deemed sufficient in his own day to secure his appointment in 1512 as chief cartographer to the court of the new Tudor king Henry VIII and also to attract the attention of the Spanish Crown, which obtained his services in 1516 as pilot-general. His involvement thereafter in the search for a transoceanic strait through the South American continent on behalf of Spain consumed much of his remaining career.

Meanwhile, further exploration of the north Atlantic languished until 1520, when a Portuguese vessel skirted the southern coast of Newfoundland, entered the Gulf of St. Lawrence, and investigated the Bay of Fundy after a failed attempt to plant a small colony on present-day Cape Breton Island. Far more significant, however, was a French expedition sent in search of a Northwest Passage three years later under Giovanni da Verrazano (1485–1528), a Florentine privateer whose capture of two Spanish treasure ships homeward bound from Mexico in 1522 had caught the attention of King Francis I. Coincidentally, news had also just reached Europe that Magellan had discovered a strait through the South American tip to the Pacific, thereby opening an all-sea route to Asia. Thus in 1523–1524, Verrazano was commissioned by the French monarch to undertake a voyage across the Atlantic to find a comparable northern passage around the Americas for France.

Although the expedition failed in its primary purpose of discovering a route as hoped, its contribution to contemporary geographic knowledge of the New World was vital. For Verrazano's exploration of North America's shores from the vicinity of Cape Fear in present-day North Carolina to New England, Cape Breton, and a little beyond revealed a large landmass of continental proportions whose coastline was continuous from La Florida in the south to Newfoundland in the north. Verrazano was likewise the first European to visit and describe in detail what later became New York harbor, the Hudson River, Block Island, Narragansett Bay, Cape Cod, and coastal Maine. He was also the first European to sight Pimlico Sound across a narrow isthmus while sailing near Cape Hatteras, a body of water he mistook to be the Pacific Ocean. As a result of his error, the so-called Mare de Verrazano (Verrazano Sea) became for years afterward a persistent feature of contemporary maps and a subject of much speculation. Finally, by naming the entire region he had reconnoitered Francesca after his royal patron, King Francis I, Verrazano laid the foundation for French claims to a huge portion of the New World in competition with Spain, and eventually with England, too.

Not for another decade, however, could France begin to exploit that claim or renew the search for a northern sea route to Asia. At war with the Habsburg emperor in Italy and Germany, the French king could ill afford to divert his attention or resources to overseas exploration. Only with the return of more settled political conditions was Francis I free to sponsor a new voyage to the north Atlantic, this time under Jacques Cartier (1491–1557). With financial backing from the French monarch, the expedition of three ships sailed from the port of St. Malo in April 1534, though whether its primary

purpose was to find a passage to the Pacific or merely to search for gold is unclear. Both were motives. At all events, after crossing the Atlantic, Cartier landed at Cape Bonaventure on Newfoundland to refit his ships before taking a careful survey of the island's northern coast. From there, he sailed through the Strait of Belle Isle, despite the hazards of ice, and investigated both the Labrador and Newfoundland shores of that narrow passage. He also explored the coasts that rimmed the south side of the Gulf of St. Lawrence as far as Anticosti Island, touching in turn at modern-day Prince Edward Island, Chaleur Bay, and the Gaspé Peninsula. According to an account of the voyage published in English almost five decades later, on 24 July Cartier erected a thirty-foot-tall cross at Gaspé, to which he affixed "a shield with [the royal emblem of] three *fleurs-de-lys* on it, and in the top was carved in the wood with antique [Roman] letters *Vive le Roy de France* [long live the king of France]," thereby taking possession of the whole land in the name of Francis I.[16]

Despite his disappointment at finding neither gold nor a passage to the Pacific, Cartier returned to St. Malo with a wealth of information about the places he had explored and the native people he had encountered. During his second expedition in 1535, however, his hope of finding a strait revived briefly when he discovered the St. Lawrence River and sailed up it to the Indian village of Hochelaga, near the future site of Montreal. By that point, Cartier had traveled a thousand miles from the Atlantic, much of it inland, and he was only prevented from sailing farther upstream by rapids that blocked his way. The effort would have been useless, in any case. Information he had gathered from native sources, combined with his own investigations, revealed the St. Lawrence to be a river and not the strait to the Pacific for which he sought. As a contemporary later reported, Cartier "now knows that there is none."[17]

But by that time, the focus of French interests in the Atlantic New World had begun to shift from the search for a Northwest Passage to settlement and territorial acquisition, always with the expectation of finding new sources of gold, spices, or other riches. Colonization was the chief object, consequently, of Cartier's third voyage, which sailed in 1541 to the St. Lawrence basin with a well-equipped expedition of two hundred would-be settlers under the governorship of the sieur de Roberval. But the small colony of Charlebourg Royal, established at Cap Rouge near the site of present-day Quebec city, did not flourish, and after two miserable winters it was abandoned. Not until the beginning of the seventeenth century would the French undertake the colonization of Canada with greater success.

Preoccupied, in the meantime, by renewed war with the Holy Roman Emperor during the 1540s and 1550s, France's activities in the New World consisted largely of raiding Spanish vessels homeward bound from Cuba and Mexico. That rivalry continued even after the return of peace in 1559, when the French Crown eyed the American coast just north of the Florida peninsula with increasing interest, in challenge to Spanish claims. But two colonies planted at Charlesfort (1562), near present-day Parris Island in South Carolina, and at Fort Caroline (1564), on the mouth of the St. Johns River in Florida, were destroyed and their garrisons massacred by Spanish forces sent from Cuba to remove the double threat. These defeats effectually dashed French hopes of establishing a foothold on the south Atlantic coast, even had France not become too embroiled in domestic chaos during the remainder of the sixteenth century to engage in maritime exploration or colonization, as the kingdom plunged into thirty-five years of civil and religious war.

Despite the failure of these early first attempts to locate it, European navigators and geographers were still no less convinced than before the voyages of Cabot and Cartier that a passage somewhere through Arctic waters not only existed, but could be found over time. Though such a passage was still only hypothetical, it appeared obvious to anyone familiar with world geography and maritime exploration that there should be a shorter, more direct route to Asia via the North Atlantic than the long and hazardous voyage by way either of the Cape of Good Hope or the treacherous Strait of Magellan and the Pacific Ocean that lay beyond. To be sure, almost nothing was known in Europe at this time of the vast northern ice cap. Yet experienced navigators conjectured that if, as many had predicted, the Tropics had proved passable at last, then the same should be true of the Arctic.

Not until the second half of the sixteenth century, however, was the search for a northern passage resumed. Because of foreign war and domestic upheaval, France had withdrawn temporarily from the field of maritime exploration, while Portugal and Spain were preoccupied with consolidating their respective empires overseas. Besides, as both Iberian kingdoms had already found their own routes to Asia through the South Atlantic, the North Atlantic was of little interest to them, except for cod fishing in the rich waters off the Grand Banks of Newfoundland. If only by default, therefore, the quest to find a northern passage somewhere through the Arctic became a largely English enterprise that aimed at securing a share of the Asian spice trade.

Yet there were other reasons for this sudden burst of activity in England, whose participation in voyages of discovery prior to 1550 had been sporadic at best. First was the creation of a royal navy under Henry VIII, combined with improvements in English maritime expertise and technology, which gave future voyages the protection and support needed for success. Second was the accident of European politics, and in particular the Tudor Crown's desire—even under Elizabeth I—for peaceful accommodation with Spain, and its unwillingness to challenge Portuguese control of the sea route around the Cape of Good Hope. Third was the spread of promotional literature for voyaging by English merchants, scholars, navigators, and expatriates living in Seville who, inspired by the example of Spain, encouraged their fellow countrymen to undertake overseas ventures in pursuit of wealth and empire. Finally was a growing national spirit that had already begun to evolve in the more cohesive states of western Europe during the later Middle Ages and that was becoming increasingly apparent in England by the late sixteenth century. This emerging sense of national identity explains Richard Hakluyt's resentful comment in the preface of his work *The Principal Navigations, Voyages, Traffiques and Discoveries of the English Nation* (1589) about how he had "both heard in speech and read in books other nations miraculously extolled for their discoveries and notable enterprises by sea, but the English of all others for their sluggish security, and continual neglect of the like attempts especially in so long and happy a time of peace, either ignominiously reported, or exceedingly condemned."[18]

By 1550, these various developments had combined to provoke in England a fervor for voyages of discovery and exploration no less intense than that felt in Portugal since 1415 or Spain since 1492. This new fervor found its first expression in a series of profitable trading ventures to north and west Africa undertaken by English navigators after 1551, which set the pace for the kingdom's maritime efforts during the remainder of the century. Also at this early date, a succession of voyages was planned and financed by a newly formed joint stock syndicate. Called the Company of Merchant Adventurers "for discovery of regions, dominions, islands and places unknown," its first presiding governor was Sebastian Cabot, who had returned to his native soil in 1547 to live out his final years. Despite its ambitious name, the company's real objective was to locate a sea route to Asia somewhere through North Atlantic waters and by that means acquire for England the same fortune in gold, trade, and spices which the West and East Indies had produced for Spain and Portugal, "whose subjects, industries, and travels by sea," noted the

company's first commission, "have enriched them, by these lands and islands, which were to all cosmographers unknown."[19]

Thus "seeing that the wealth of the Spaniards and Portuguese, by the discovery and search of new trades and countries was marvelously increased," echoed Richard Hakluyt three decades later, "supposing the same to be a course and mean for them also to obtain the like, [the Merchant Adventurers] resolved upon a new and strange navigation ... for the search and discovery of the northern part of the world, to open a way and passage to our men for travel to new and unknown kingdoms," above all China.[20] The first route to be advocated and attempted, however, was not in the northwest Atlantic as before, but in the northeast Atlantic around Norway and Russia through the so-called frostie sea. Hence, in May 1553, the company dispatched three ships with the express intention of sailing to Cathay by way of a Northeast Passage. Sir Hugh Willoughby (ca. 1500–1554), "preferred above all others," wrote Hakluyt, "both by reason of his goodly personage [he was well born] as also for his singular skill in the services of war," was named captain-general of the expedition.[21]

Although the small squadron was separated in a storm near the Lofotu Islands off the Norwegian coast, Willoughby and two vessels pressed onward as far perhaps as Novaya Zemlya, a large island located north of the Arctic Circle in the Barents Sea. But with the close of the short Arctic summer fast approaching, he returned to a small anchorage in Lapland near Nordkapp, where he planned to pass the winter months. Tragically, the two ships were frozen in by ice, and the entire company perished from cold and starvation. As for the missing third vessel commanded by Richard Chancellor (d. 1556), it had entered the White Sea following its separation from the rest of Willoughby's squadron and sailed to the Russian village of Archangel. From there, Chancellor traveled fifteen hundred miles overland in the dead of winter to Moscow, where he secured from Ivan the Terrible (Czar Ivan IV) extensive trading privileges for his countrymen that he took back to England in summer 1554.

Chancellor's maritime achievement was impressive, while the diplomatic and commercial contacts he had opened with Czar Ivan's court were considered to be so important that he returned to Russia in 1555 to arrange the details of Anglo-Russian trade on behalf of a brand-new Muscovy Company formed earlier that year. At the same time, he learned of Sir Hugh Willoughby's unhappy fate and recovered the late captain-general's papers. But Chancellor's two voyages contributed little toward resolving the problem of a Northeast Passage. Consequently, while the English captain-turned-ambassador

was preparing to leave Russia on his second and, as it turned out, fatal homeward journey in 1556, another expedition sailed from England under Stephen Borough (1525–1584) to carry on where Willoughby and Chancellor had left off. This was Borough's second journey to the region, for he had served as ships master on Chancellor's maiden voyage to Archangel. With a single small pinnace and a crew of just eight men, Borough sailed to the southern tip of Novaya Zemlya, passed through the narrow Kara Strait and into the Kara Sea, looking for the mouth of the Ob River. But the ship was forced to turn back by "terrible heaps of ice" and tempests so fierce, wrote Borough, "that we saw not the like, although we had endured many storms since we came out of England . . . . And thus being out of all hope to discover any more to the eastward this year," the expedition wintered at the mouth of the Dwina River, and returned home the following spring.[22]

With Borough's failure, attempts to reach China by means of a Northeast Passage flagged for more than twenty years, as Englishmen sought a different landward route from Moscow down the Volga River to the Caspian Sea, and thence through central Asia along portions of the ancient Silk Road. Not until 1580 did two English seamen, Arthur Pet and Charles Jackman, undertake another attempt to pass around the north of Russia. Though they, too, managed to reach the Kara Sea as Borough had done, also like him they were so beset with ice, "uncertain currents, dark mists and fogs, and divers other fearful inconveniences they were subject [to] and in danger of," wrote Hakluyt, that they were compelled to turn back with tragic results.[23] Jackman's vessel vanished without trace off the Norwegian coast, and Pet returned to England only with great difficulty. With this new failure, English ardor to find a Northeast Passage cooled, and no more expeditions were sent from English ports for that purpose during the rest of the century.

The task now fell to the Dutch, who took up the search in 1594, when a fleet of three ships left Holland under the command of William Barents (d. 1597). Considered to be one of the greatest Arctic navigators, Barents sailed into the sea that now bears his name, coasted the whole length of Novaya Zemlya from north to south, and then penetrated the Kara Sea via the Kara Strait to the latitude of the Ob River. The expedition was a test of seamanship, during which Barents proved his skill. Forced to maneuver from patch to patch of open water—advancing, withdrawing, dodging, and turning about eighty-one times—only after twenty-five days and more than fifteen hundred nautical miles of sailing did he finally accept that he could proceed no farther and began the journey homeward. A second

voyage in 1595 achieved still less, owing to the unusual severity of the previous winter, which had left the Kara Strait choked with ice.

Barents's third and final expedition in 1596 was also his boldest, for instead of setting his course either by the northwest or the northeast, he intended to cross the Pole itself. In the process, he discovered Spitsbergen Island deep within the Arctic Circle but was prevented by icebergs from going farther north. With his original plan no longer workable, Barents sailed eastward to Novaya Zemlya and rounded its northern tip, when disaster struck. His ship was caught and crushed by ice, forcing the expedition to spend the winter on a foreign shore in severe hardship. Living in almost complete Arctic darkness, their only shelter a single makeshift shed built entirely of driftwood, Barents and his men barely subsisted on what little wild game they managed to trap and "lepel leaves" (a form of grass) by means of which they avoided the worst consequences of scurvy. All the while they had to contend with ferocious attacks by hungry bears. The following spring, the survivors reached the Russian coast after a difficult journey in two open boats. Barents was not among them, however, for he died en route.

Although Dutch interest in locating a Northeast Passage waned thereafter, two final attempts were made in 1607 and 1608 by English explorer Henry Hudson (ca. 1550–ca. 1611). He initially undertook to find a way between Greenland and Spitsbergen, but like Barents before him, he found his original course blocked by Arctic ice. Hudson's subsequent expedition also met with failure. This time he followed the established route around Norway to the Barents Sea as far as Novaya Zemlya, when he too was forced back by ice. This was not Hudson's last effort to find a sea route in the northeast, but his final voyage in 1609 to that end is usually associated with the search for a strait in the northwest Atlantic that had resumed in 1576. For all intents and purposes, therefore, the quest for a Northeast Passage during the Age of Discovery ended with Hudson's second expedition. Not until 1879 would the first successful navigation of the route be completed under Swedish sponsorship by the Finnish geographer Baron Nils Nordenskjold, after a voyage lasting a year and a half.

But even before the search for a sea route around northern Russia to China was abandoned in the early seventeenth century, hope of finding a viable passage around the North American continent revived, especially in England where Sir Humphrey Gilbert (ca. 1539–1583) emerged as its leading advocate. In fact, he published an enthusiastic treatise on the subject, *A Discourse of a Discoverie for a New Passage to Cataia* (1576), which drew heavily upon current

knowledge of geography, classical authors like the Roman naturalist Pliny the Elder, and conversations with various English mariners, some of whom had engaged in the search for a northeastern route. Gilbert argued that a westward passage across the top of North America was the more practical of the two in his firm belief that once past Labrador, the North American coast sloped southward and, hence, was more likely to be ice free. He further hypothesized that North America was in reality the lost island of Atlantis and, moreover, that the Strait of Magellan at the tip of South America had its counterpart in the north, where the so-called Strait of Anian linked the Atlantic to the Pacific.

Gilbert's treatise was used to help raise financial support for the three voyages between 1576 and 1578 of Sir Martin Frobisher (ca. 1535–1594), a gentleman adventurer and opportunist whose primary objective was to find the northern passage so strongly advocated by his old friend and principal backer. That "passage to Cathay," wrote Richard Hakluyt, was "supposed to be on the north and northwest part of America: where through our merchants may have course and recourse with their merchandise, from these our northernmost parts of Europe, to those Oriental coasts of Asia, in much shorter time, and with greater benefit than any others, to their no little commodity and profit."[24] Sailing west from England in June 1576 on his first voyage, Frobisher made his initial landfall in Greenland, before pushing on to discover Baffin Island. There he entered a deep inlet, now named for him, which he mistook for the desired strait. He also found quantities of dense and heavy black rock that he and others on the expedition believed to be gold ore, because of the way it sparkled in sunlight. But as it turned out, quoted Hakluyt from an old proverb ten years later, "all is not gold that glistens."[25] In any event, that discovery aroused further English interest in the region for its apparent "show of great riches and profit" and led to the formation of the Company of Cathay.[26] Although Elizabeth I was rather more skeptical about this northern land she called Meta Incognita (worth unknown), the queen nevertheless purchased shares in the new enterprise.

Named admiral of the Cathay Company, Frobisher sailed on a second venture in 1577 with the dual purpose of collecting more ore and pushing on to the Pacific Ocean through the strait he claimed to have found the previous year. But the admiral largely ignored the second part of his commission, and after loading his three ships with more of the black rock, he sailed directly back to England. During Frobisher's third voyage in 1578—intended partly to collect more ore, partly to find the passage to Cathay, and partly to establish a

colony in the New World—a violent tempest, followed by continuous fog and threat of ice, drove his ships off course into what is now Hudson Strait. Soon discovering his navigational error and also concluding that this might be a better passage to China than the route he thought he had located on his first voyage, Frobisher followed the strait for two hundred miles, "having always a fair continent upon his starboard side, and a continuous still of open sea before him."[27] As the explorer later confessed, wrote Richard Hakluyt, "if it had not been for the charge and care he had of the fleet he both would and could have gone through to the South Sea, and dissolved the large doubt of the passage; which we seek to find to the rich country of Cathay."[28] But he was prevented from pursuing that course by grumbling among his fearful crew that he had proceeded too far already. Thus compelled to turn back, Frobisher sailed for England after taking on board more ore. Otherwise, his third voyage was a failure like the other two. The colony was not established; the black rock proved to be worthless; and Gilbert's Strait of Anian was never discovered. The Company of Cathy had been reduced to bankruptcy in the meantime.

Yet, this first stage in the renewed quest for a Northwest Passage had not been entirely futile. For if Frobisher's three voyages had accomplished nothing else, they had revealed at least that the North Atlantic consisted of islands and open water between Labrador and the Pole, as opposed to the older notion of a single impenetrable landmass. Nor did Frobisher's failure dampen enthusiasm in England to locate the elusive Strait of Anian, even though several years elapsed before additional attempts were made. Twice, for example, Sir Humphrey Gilbert sailed under royal patents granted by Queen Elizabeth to explore and colonize new lands for the Tudor Crown. A strengthening sense of national pride also motivated these voyages, for although the Cabots, wrote the chronicler Richard Haye,

> were the first finders out of all that great tract of land stretching from the cape of Florida unto those islands we now call the Newfoundland: all which they brought and annexed unto the Crown of England, . . . the French, as they can pretend less title unto these northern parts than [even] the Spaniard, did but review [i.e., revisit] that discovered by the English nation, usurping upon our right, and imposing names upon countries, rivers, bays, capes or headlands, as if they had been the first finders of those coasts.[29]

Gilbert's first two voyages were unsuccessful, however, for his ships were driven back by storms on both occasions. Notwithstanding these

initial setbacks, he made a third attempt in 1583, planning this time to plant a colony in North America that could also serve as a way station for ships bound to China and Japan through the Northwest Passage, in the absolute conviction that the strait existed. To that end, he sailed for Newfoundland where, in a deliberate act, he reasserted England's possession of the island on behalf of Queen Elizabeth, in the presence of many Portuguese, French, Basque, and English seamen then fishing off the Grand Banks whom he had summoned to witness the ceremony. Ultimately, however, the expedition achieved little and ended in misfortune, when Gilbert and the ship he was sailing on sank in a heavy squall on the return voyage to England.

Undaunted by this loss, a succession of English adventurers took up the quest, starting with John Davis (ca. 1550–1605). Recognized by historians as one of the most distinguished navigators of his time, Davis combined practical seamanship with theoretical skill and determination in a manner that placed him at the forefront of Elizabethan mariners. He not only designed and experimented with nautical instruments but also authored two books, one a manual on navigation titled *The Seaman's Secrets*, the other a treatise on the Northwest Passage titled *The Worldes Hydrographical Description*, which was clearly influenced by the theories of his childhood friend and associate Sir Humphrey Gilbert.

As chief navigator for the newly formed Northwest Company (est. 1584), Davis made three attempts to discover the passage, in 1585, 1586, and 1587. His aim on each occasion was to chart a more northerly course than Frobisher had done, by searching for a strait somewhere between Greenland and the North American archipelago. In the process, he sailed repeatedly up the west coast of Greenland, touched ground at Baffin Island (where he also discovered Cumberland Sound), passed by the entrance of Hudson Strait, and skirted the shores of Labrador. Everywhere, he encountered native peoples, whose appearance, customs, and modes of living he described briefly, and dodged floes of ice that were both dangerous and curious. During his second voyage in 1586, for example, Davis wrote that "we fell upon a most mighty and strange quantity of ice in one entire mass, so big as that we knew not the limits thereof, and being withall so very high in form of a land, with bays and capes and like high cliffs, as that we supposed it to be land and therefore sent our pinnace off to discover it: but at her return we were certainly informed that it was only ice."[30]

Davis's last expedition, in 1587, was his most significant, for after making his usual landfall at Greenland, he steered up its west

coast to the very high latitude of 72° 46', the northernmost point anyone had reached so far. There he sighted a mountainous headland near present-day Upernavik, which he christened Sanderson's Hope after one of the voyage's backers. Past this promontory lay the way to the true Northwest Passage, but Arctic ice frustrated his attempts to proceed any farther and compelled him to sail for England. This reverse by no means dampened Davis's enthusiasm to undertake another expedition, but his seamanship was required at home for the time being, to deal with the threat of the great Spanish Armada that sailed against England in 1588. Hence, not until 1591 when the national danger had passed was he able to renew the search for a Northwest Passage, this time by looking for its western entrance in the north Pacific. To that end, he sailed with an expedition under Thomas Cavendish, which planned to circumnavigate the globe. But the small fleet was unable to negotiate the Strait of Magellan. Davis's ship then became separated from the others in a storm, lost its sails, and drifted in the south Atlantic to the Falkland Islands. He managed to return to England in 1593 and spent the rest of his nautical career leading commercial voyages to the Far East, where he died in battle against Japanese pirates near Singapore in 1605.

Despite these repeated failures, the English were not yet willing to abandon the search for a Northwest Passage. On the contrary, several more expeditions sailed between 1600 and 1631 before the quest was finally relinquished. In 1602, for example, the directors of the Honorable East India Company, formed just two years before, sent George Weymouth to find a route in the same region that Frobisher and Davis had looked. Though he successfully penetrated Hudson Strait, Weymouth was forced to turn back by a mutinous crew. The same fate befell Henry Hudson in 1610–1611, but with more tragic consequences. During his third attempt the previous year to find a Northeast Passage while in service to the Dutch East India Company, he had been forced to turn west by a rebellious crew that refused to follow Barents's route northward. Hudson's new course took him west to Newfoundland, from where he sailed southward along the American coast as far as Chesapeake Bay. Then retracing his steps to the north, he located the mouth of the river named for him and sailed up it almost as far as present-day Albany before returning home to Europe.

On his last voyage in 1610–1611, Hudson determined to look for a route to the south of where his predecessors had searched. Following that course, he sailed through the strait named for him and into the great bay that lay beyond. Proceeding southward along its eastern shore in search of a strait, his progress was finally halted

by James Bay, after which Hudson beat up and down this large body of water in a vain effort to find his way into the Pacific. With the advent of winter, however, his ship was frozen in. The following spring, his crew—having suffered great hardship—mutinied. Hudson, his son, and a few loyal seamen were then set adrift in a small boat to die of exposure, while the mutineers sailed for England.

Still more voyages followed. In 1612, Sir Thomas Button was sent by Hudson's former backers to discover the late explorer's fate and to continue the search for a northern sea route to the Pacific. Retracing his predecessor's course through Hudson Strait, Button reconnoitered the shores of Hudson Bay as far as the mouth of the Nelson River where, iced in, he was compelled to spend the winter. Despite having suffered severe hardship, including the outbreak of scurvy among his crew, Button resumed his search for Hudson and the strait the following spring. For that purpose, he sailed north toward present-day Southampton Island at the mouth of the bay, where he hoped to locate the western passage, if not his missing countryman. Having found neither, however, Button returned to England.

In 1615 and again in 1616, Robert Bylot, who had been on Hudson's final expedition, and William Baffin took up the quest, but at first directed their search for a route to the Pacific north of Southampton Island. When this effort failed to produce results, on their second voyage to the region the two explorers followed Davis's former route between Greenland and Baffin Island. Sailing along the west coast of Greenland beyond Sanderson's Hope, they reached the very high latitude of 78°, having gone farther north than even Davis had sailed. But with their further progress blocked by pack ice, the explorers turned west across Baffin Bay and reconnoitered portions of the archipelago north of Baffin Island, before taking a careful survey of the island itself. Only after they had made a complete circumnavigation of the ocean between Greenland and the Canadian Arctic did Bylot and Baffin return to England with a wealth of new geographical information. Yet neither man understood how important that information was, for during the voyage they had discovered Lancaster Sound, a narrow strait that is, in fact, the entrance of the real Northwest Passage through Canada's northern waters.

Another fifteen years elapsed before a final effort was made during the Age of Discovery to locate a transoceanic route from the Atlantic to the Pacific around North America. In 1631, two separate expeditions left England, one under Luke Foxe and the other under Thomas James. Although neither voyage succeeded in locating a passage as hoped, together they provided the most thorough

examination of Hudson Bay to date. But apart from adding to contemporary knowledge of Arctic geography and navigation, both expeditions returned to England with little more to show. Thereafter, the search for a Northwest Passage was abandoned until the mid-nineteenth century. Only in 1906 after a three-year voyage would Norwegian polar explorer Roald Amundson successfully navigate his way through the Arctic to the Pacific, thus completing what the sixteenth-century mariners had begun. Not until 1943 was the same route finished in a single season by the Canadian ship *St. Roch* under Captain Henry Larsen.

Before the Second World War and the advent of transatlantic air passenger service, wrote author Jeannette Mirsky in 1948,

> the Arctic was a region unknown to most people. It was all ice and snow, it was inaccessible, it was "at the top of the map." . . . [But] the Arctic is no longer remote; it is the modern Mediterranean, for around it stretch the great [modern] powers . . . . The Arctic has become part of our world.[31]

But, added historian J. H. Parry in 1963, accurate knowledge of the Arctic seas and coastlines became possible only in comparatively recent times with the aid of aircraft and icebreakers. Otherwise, the sixteenth- and early seventeenth-century voyages in search of an Arctic passage,

> whether northeast or northwest—imaginative, bravely led and increasingly thorough—were all failures; but failures only in an immediate sense. They added greatly to geographical knowledge and to navigational experience and confidence. Those who took part in them— and they included some of the best seamen of their day—found new lands and opened new trades, which their successors were to develop and exploit.[32]

Notes

1. John H. Parry, *The Spanish Seaborne Empire* (London: Hutchinson, 1966), 49–50.

2. Ibid., 52; Kathleen Ramoli, *Balboa of Darién: Discoverer of the Pacific* (Garden City, NY: Doubleday, 1953), 14, 80, 175, 184.

3. Pietro Martire d'Anghiera, First Book, Second Decade, *Decades*, 52vo–53. Martire wrote his great work over several years, and each major section of the volume was called a "decade." The decades were divided in turn into chapters, referred to as "books." Only the obverse of each page in

the earliest English translation of Martire's text is numbered, not the reverse. Hence "52vo" indicates the reverse side of page 52.

4. Ibid., First Book, Third Decade, 91.

5. Ibid., Sixth Book, Third Decade, 118.

6. Francis A. MacNutt, trans. and ed., *De orbe novo: The Eight Decades of Peter Martyr d'Anghera*, 2 vols. (New York: G. P. Putnam's Sons, 1912), Ninth Decade, 2:283.

7. Anghiera, Tenth Book, Second Decade, 86vo–87.

8. Hernán Cortés, *Letters from Mexico*, Anthony Pagden, trans. (New Haven: Yale University Press, 1986), 267.

9. Cortés to Charles V, 15 October 1524, ibid., 301.

10. Ibid., 326–328.

11. Anghiera, Tenth Book, Second Decade, 85vo.

12. Antonio Pigafetta, *Magellan's Voyage: A Narrative Account of the First Circumnavigation*, R. A. Skelton, trans. (New York: Dover Publications, 1969), 38.

13. Ibid., 57.

14. Francisco López de Gómara, *Cortés: The Life of the Conqueror by His Secretary*, Lesley B. Simpson, trans. and ed. (Berkeley: University of California Press, 1964), 334. Originally, the biography formed part of the author's larger work *The Conquest of the Weast India*.

15. Boies Penrose, *Travel and Discovery in the Renaissance, 1420–1620* (Cambridge, MA: Harvard University Press, 1960), 142.

16. Ramsay Cook, ed., *The Voyages of Jacques Cartier*, H. P. Biggar, trans. (Toronto: University of Toronto Press, 1983), 26. For the original, see Jacques Cartier, *A Shorte and Briefe Narration of the Two Navigations and Discoveries to the Northweast Partes called Newe Fraunce* (London: 1580), 21.

17. Lagarto to King John II of Portugal, 22 January 1539(?), Cook, *Voyages of Jacques Cartier*, 131.

18. Richard Hakluyt, *Voyages and Discoveries: The Principal Navigations, Voyages, Traffiques & Discoveries of the English Nation* (London: Penguin, 1985), 32.

19. "Ordinances for the direction of the intended voyage for Cathay," ibid., 55.

20. "The new navigation and discovery of the kingdom of Muscovy, by the northeast, in the year 1553," ibid., 60.

21. Ibid., 61.

22. "The Navigation and Discovery towards the river Ob, made by Stephen Burrough," ibid., 74.

23. Preface to the second edition, 1598, ibid., 35.

24. "The Second Voyage of Martin Frobisher, made to the west and northwest regions, in the year 1577," ibid., 188.

25. Ibid., 191.

26. "The Third voyage of Captain Frobisher, pretended for the Discovery of Cathay, 1578," ibid., 187.

27. Ibid., 201.

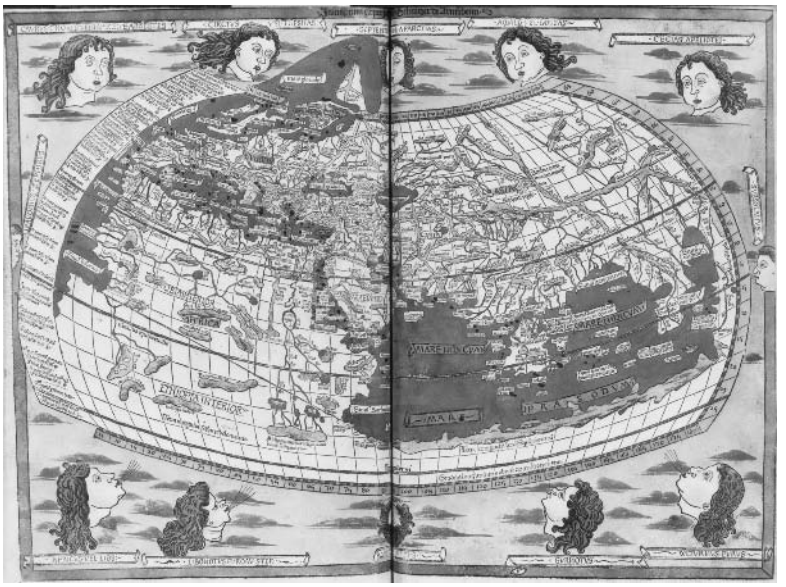
28. Ibid., 202.

29. "A report of the voyage attempted in the year of our Lord 1583 by Sir Humphrey Gilbert," ibid., 231–232.

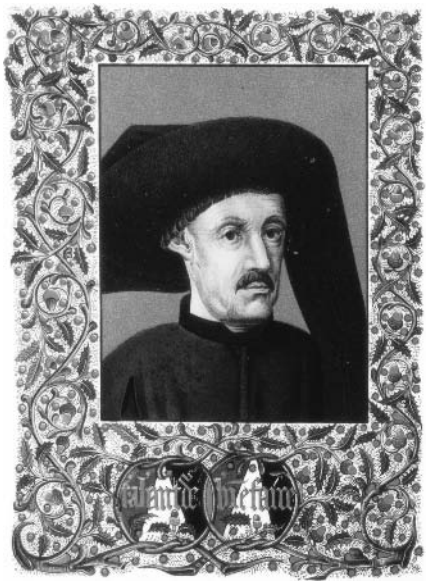
30. "The second voyage attempted by Mr. John Davis with others, for the discovery of the North Passage, in Anno 1586," ibid., 300.

31. Jeannette Mirsky, *To the Arctic! The Story of Northern Exploration from Earliest Times* (Chicago: University of Chicago Press, 1948), xxiv.

32. John H. Parry, *The Age of Reconnaissance: Discovery, Exploration and Settlement, 1450 to 1650* (Berkeley: University of California Press, 1963), 206.



A fifteenth-century reproduction of a world map from the *Geography of Claudius Ptolemy*. While his knowledge of the Mediterranean Sea and adjacent lands was reasonably accurate, everything south of Africa's northern coast is labeled Terrae Incognitae ("unknown lands"). The Indian Ocean is also represented as a landlocked sea. (Courtesy of Library of Congress)



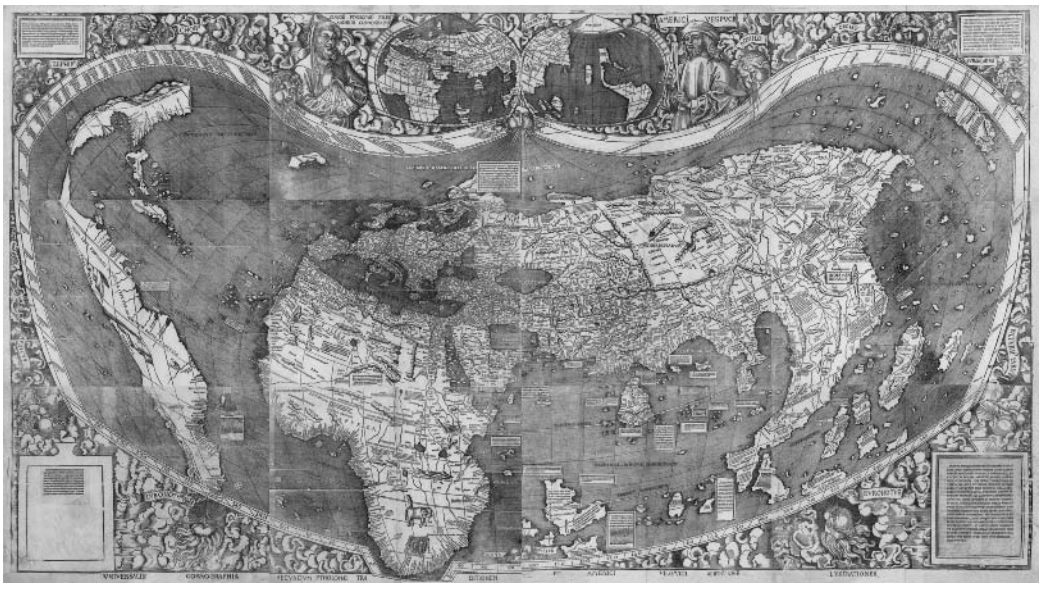
A contemporary portrait of Prince Henry "the Navigator," who sponsored the early Portuguese voyages of exploration and is rightly credited with having launched the European Age of Discovery. (Courtesy of Library of Congress)

QVI RATE VELI VOLA OCCIDVOS PENETRAVIT AD EOS
PRIMVS ET AMERICAM NOBILITAVIT HVMVM
CHRISTOPHORVS COLVMBVS LIGVR INDIARV PRIM INVEXIT
ASTRORVM CONSVLT ET IPSO NOBILIS AVSV
CHRISTOPHOR TALI FRONTE COLVMB ERAT

Although no portrait of Christopher Columbus was painted in his own lifetime, this is a sixteenth-century representation of the Genoese discoverer of the New World. (Courtesy of Library of Congress)

A nineteenth-century portrayal of Ferdinand Magellan, whose expedition across the Pacific Ocean from South America in 1519–1522 was the first to circumnavigate the globe, although Magellan was killed in the Philippine Islands and did not complete the voyage. (Courtesy of Library of Congress)

A modern reproduction of the caravel *Santa Maria*, Christopher Columbus's flagship on his first voyage across the Atlantic Ocean in 1492. (Courtesy of Library of Congress)



The world map published by Martin Waldseemüller in 1507 was the first to name the lands discovered by Columbus in the western Atlantic "America," after Amerigo Vespucci. Note that South America is represented as a sliver of land, for no one yet knew its continental proportions. By contrast, Africa and portions of Asia are portrayed with reasonable accuracy. (Courtesy of Library of Congress)

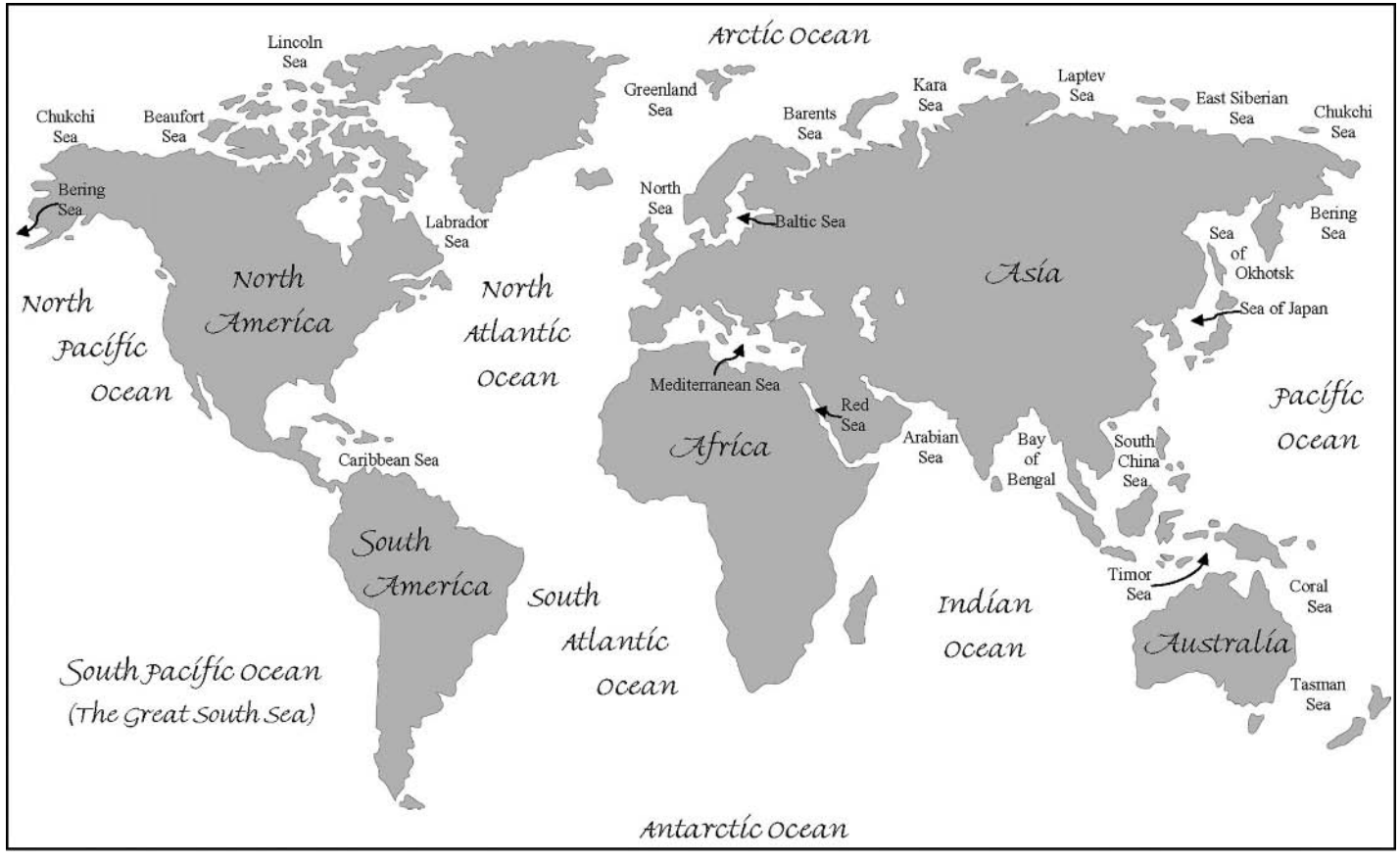
A nineteenth-century copy of a sixteenth-century portrait of Martin Frobisher, who made three voyages to the Arctic in an unsuccessful search for a Northwest Passage to China. (Courtesy of Library of Congress)

This romanticized picture painted in the nineteenth century represents the abandonment of Henry Hudson, his son, and a few loyal seamen in Hudson Bay by the explorer's mutinous crew. The castaways disappeared without trace. (Courtesy of Library of Congress)

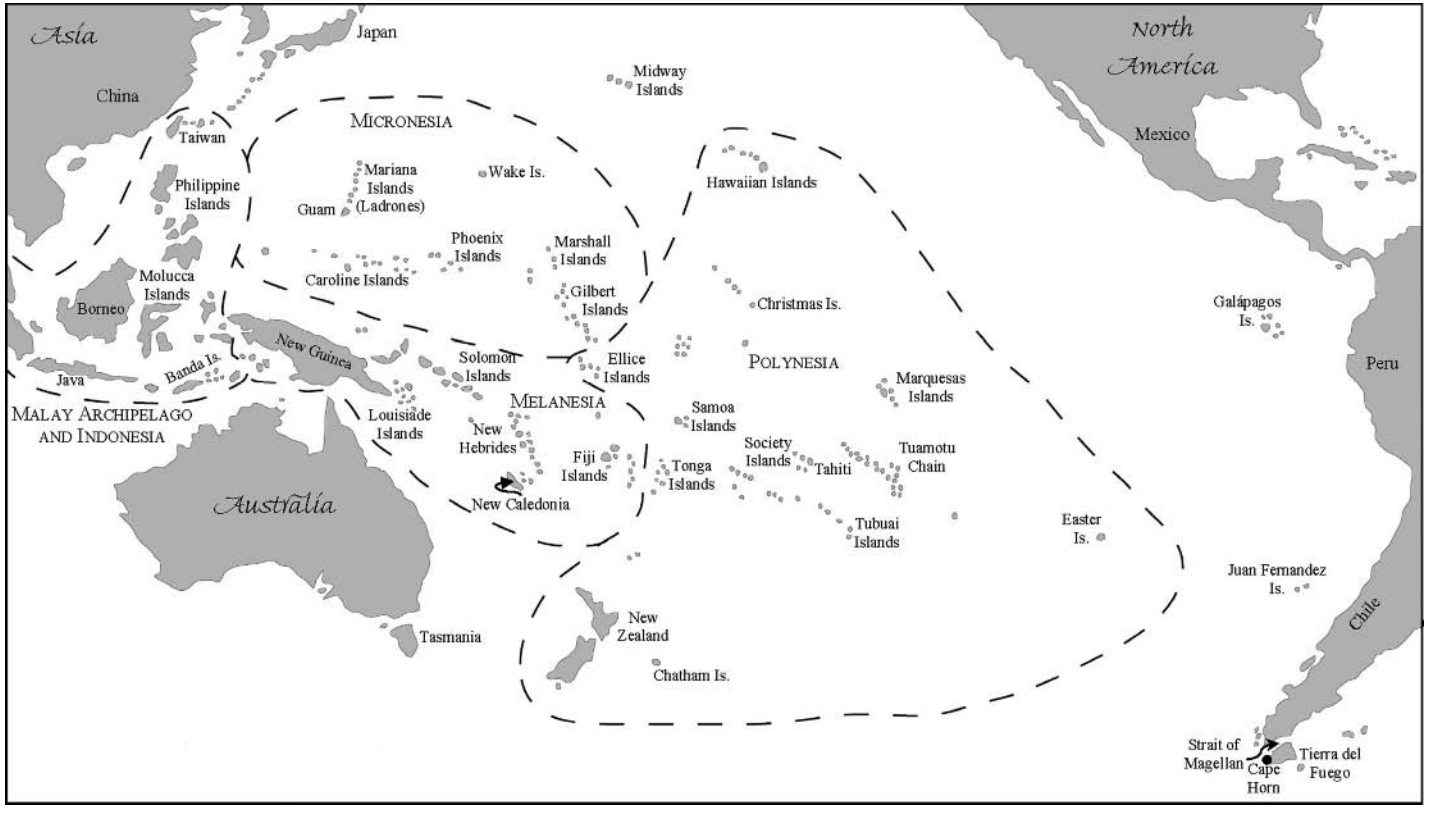
This world map, published in 1565 by F. Bertoli, not only reveals how improved European knowledge had become of the geographic contours of Asia, Africa, and the New World as a result of successive voyages of exploration, but it also clearly shows the Terra Australis Incognita or Great Southern Continent that Europeans believed existed in the southern part of the globe. (Courtesy of Library of Congress)

This engraving, copied from an eighteenth-century original painting, portrays Captain James Cook, who is widely regarded as the greatest explorer of the Pacific Ocean. (Courtesy of Library of Congress)

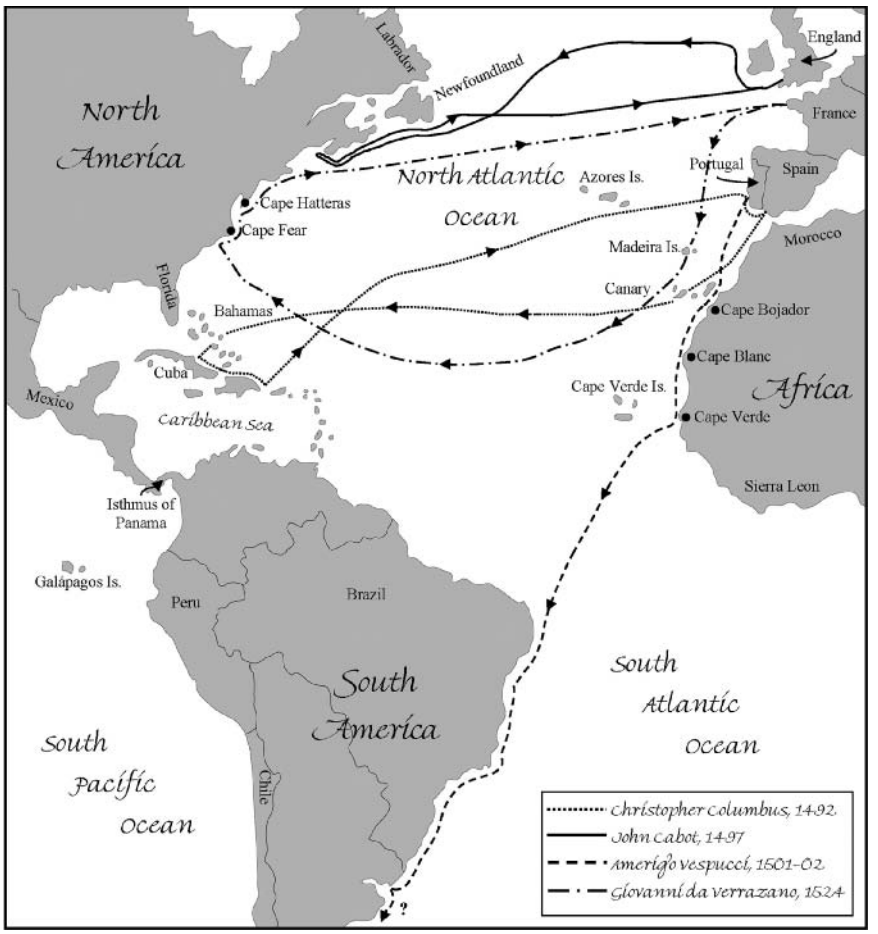
A portrait of French explorer Louis-Antoine de Bougainville, whose voyage to the Pacific Ocean was less extensive than those of his English contemporary James Cook, but whose contributions to European geography and scientific knowledge of the Great South Sea were nonetheless significant. (Courtesy of Library of Congress)



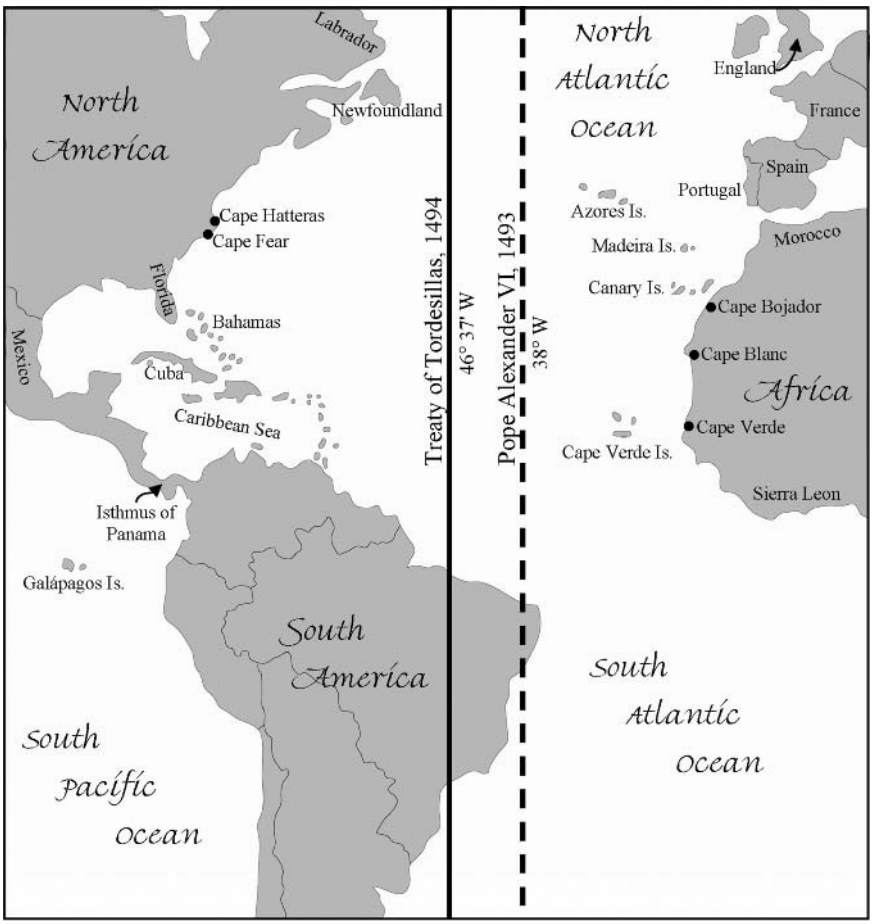
World continents, oceans, and seas.



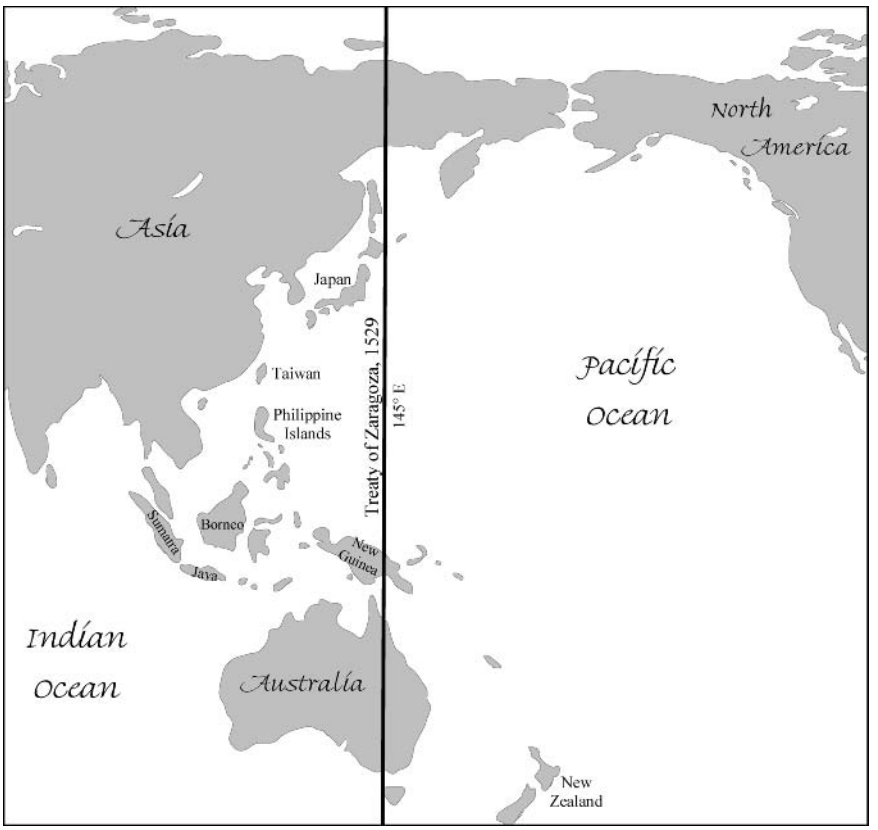
Island groups of the Pacific.



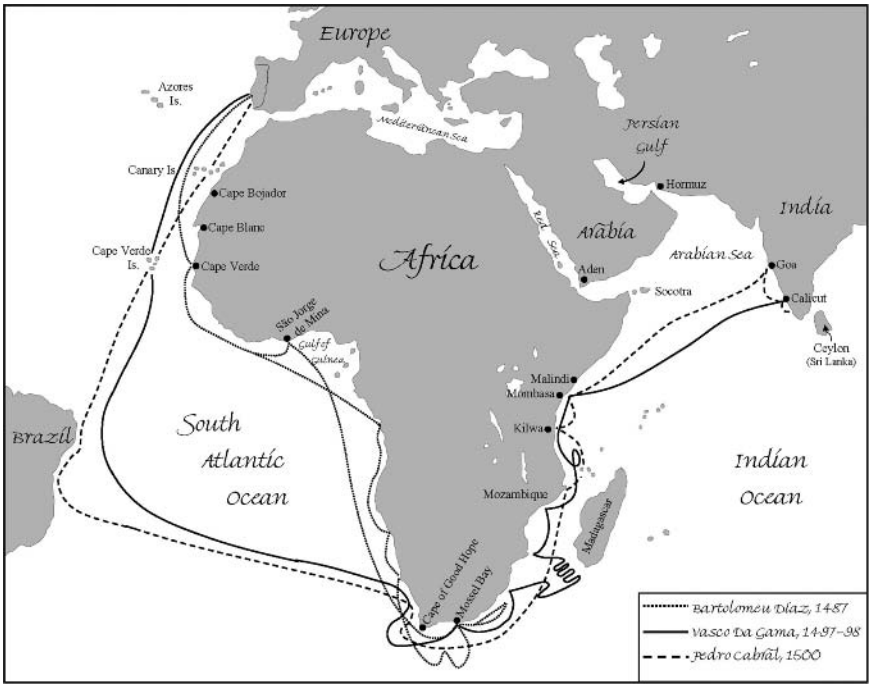
Voyages of Columbus, Cabot, Vespucci, and Verrazano.



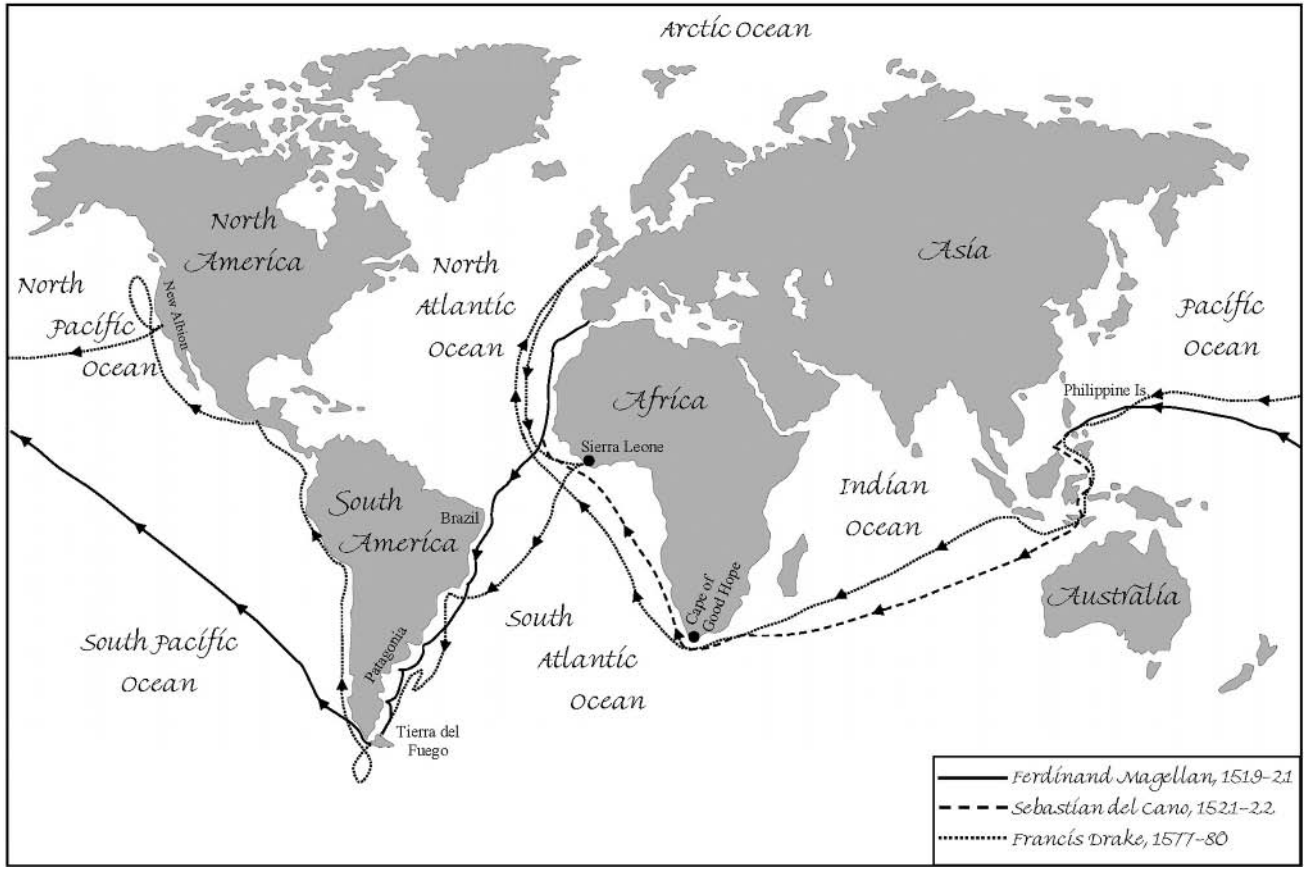
Demarcation of the globe between Spain and Portugal—Atlantic.



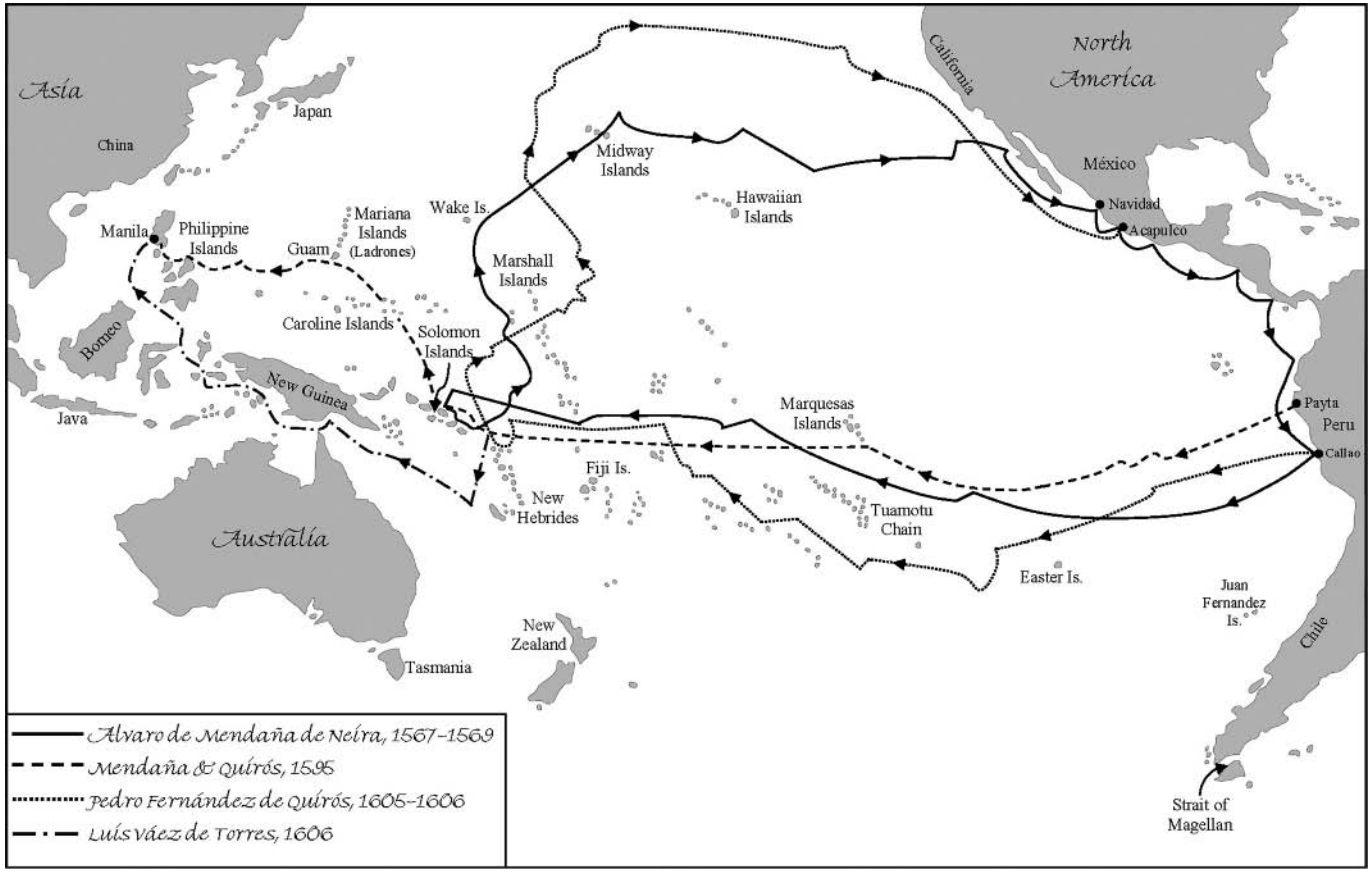
Demarcation of the globe between Spain and Portugal—Asia.



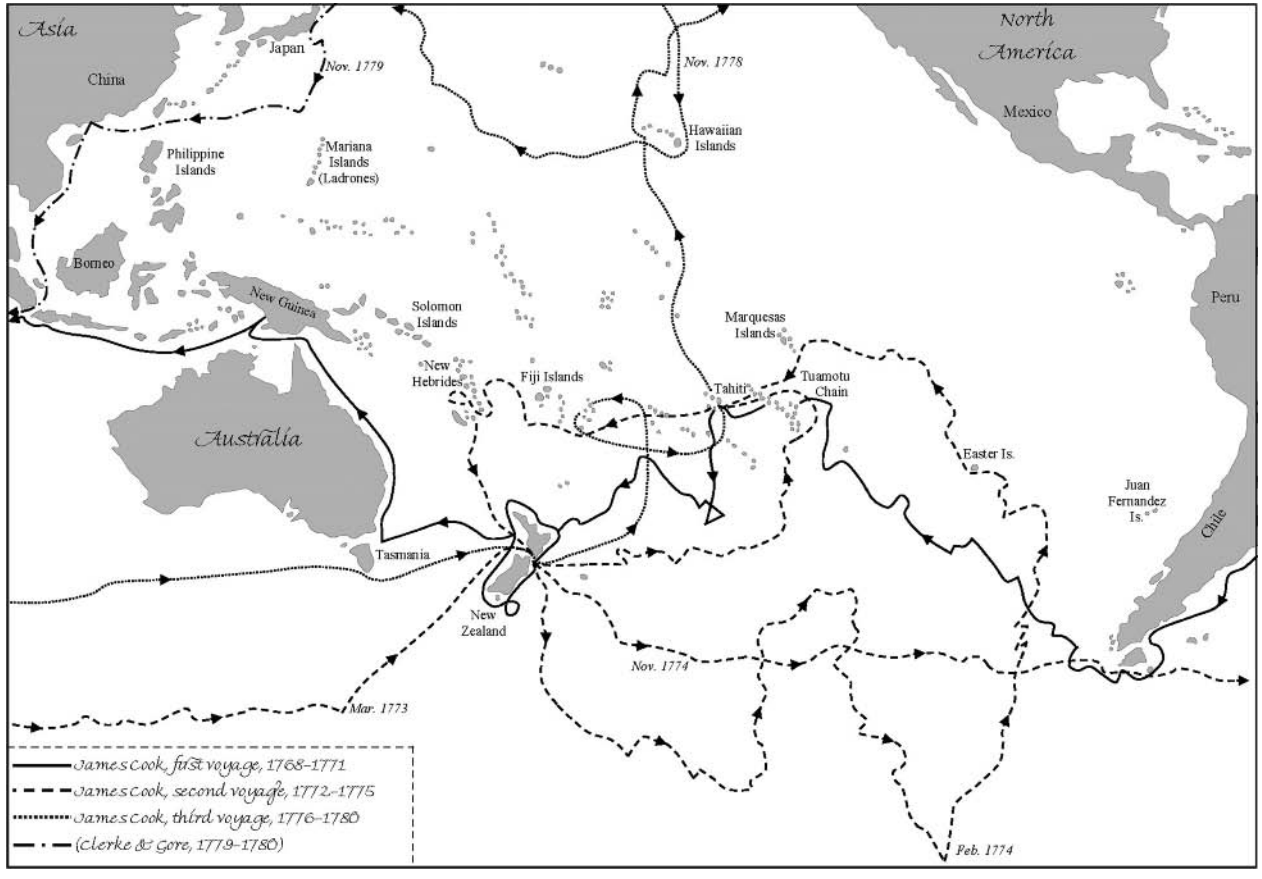
Voyages of Días, Da Gama, and Cabral.



Voyages of Magellan, del Cano, and Drake.



Voyages of Mendaña, Quiros, and Torres.



Voyages of Cook, Clerke, and Gore.

CHAPTER 5

EXPLORATION OF THE GREAT SOUTH SEA

Curiously, most histories of maritime exploration during the Age of Discovery tend to ignore European voyages into the Pacific following the sixteenth-century circumnavigations of Ferdinand Magellan and Sir Francis Drake. Or they skip directly from the achievement of those two navigators to the expeditions of James Cook, Louis de Bougainville, and their successors in the latter third of the eighteenth century when, historians argue, the motives for exploration transformed from the single-minded search for gold and glory in the name of God to systematic investigation of new lands and new cultures in the name of science. One reason for this omission may be that scholars regard as insignificant the activities of European mariners prior to the well-planned, state-sponsored, "professional" expeditions organized between 1764 and 1800. For the earlier voyages into the Pacific were mostly inconclusive, little known, unsustained, unsystematic, and commanded more often by privateers and merchant-adventurers in search of plunder than by scientists and naval officers under royal commission. Another reason for neglect may be the sheer vastness of the subject, which befits the vastness of the Pacific Ocean itself. A third reason may be the simple matter of periodization, as historians struggle to divide the topic chronologically into manageable segments for easier comprehension, but without disrupting its natural continuity.

A final reason for overlooking the Pacific may be that historians generally consider the Age of Discovery to have ended around the year 1600, or 1650 at the latest, and view whatever followed by way of exploration as a by-product of a subsequent Age of Empire. Yet regardless of their motives or objectives, because Spanish, English, Dutch, French, and, later, Russian navigators sailed repeatedly into the Great South Sea ever since Magellan's *Victoria* limped back to

Spain in 1522, locating new lands, encountering new peoples, and vastly expanding geographic knowledge of the world either by accident or by design, Pacific exploration before 1800 is an essential part of the story of maritime discovery. Moreover, just like the search for an all-sea route to Asia via the south Atlantic or through Arctic waters across the top of the world, the exploration of the Pacific was not the work of a single individual or a single nation, but of Europe.

Prior to 1519, however, the Pacific was an unknown, uncharted sea into which few human beings had ventured. To be sure, the island groups of Melanesia, Micronesia, and Polynesia had been settled in prehistoric times by people whose voyages in primitive boats over vast stretches of open water were remarkable. But these achievements were isolated events and unknown to the wider world. Real exploration of the Pacific had to wait many centuries, therefore, until ships, navigation, and simple curiosity reached a state of development that emboldened men to sail out of sight of land during months at a time. For Pacific exploration was by necessity seaborne exploration. In the interim, the Asian inhabitants of the ocean's western rim showed no apparent interest in what lay beyond that great body of water's eastern horizon, being content with their coastal and interisland trade from the shores of east Africa to the islands of Indonesia. The natives who lived along the Pacific coasts of the Americas displayed a similar lack of curiosity in the sea apart from fishing, and hence developed neither the vessels nor navigational skills necessary for long-distance voyaging.

Exploration of the Pacific was thus left to mariners from Europe, but only after the preliminary voyages of discovery in the fifteenth and early sixteenth centuries had placed Europeans in the spice islands on the ocean's Asian fringe and in the New World along its eastern rim. The initial surge for trans-Pacific exploration, led by Spain in its rivalry with Portugal to find and lay claim to the Moluccas, began of course with Magellan's epic voyage of 1519. In the event, Portugal won the race for the spice islands, and thereafter focused its energies and resources on consolidating its maritime empire in the East. Magellan's accidental discovery of the Philippines had nevertheless secured for Spain an important toehold in Asia, while the conquest of the Aztec and Inca Empires in the New World also extended Spanish power along the Pacific coasts of Central and South America. Soon after, the establishment of ports at Navidad and Acapulco in Mexico and at Payta and Callao in Peru provided facilities for further exploration of the South Sea, over which Balboa had claimed exclusive ownership for the Spanish Crown in 1513, along with all islands and contiguous territories.

From the outset, Pacific exploration was driven by the usual search for gold, God, and glory, but with one additional lure: the widespread belief since ancient times in the existence of a great southern continent, originally called the Antipodes (opposite feet) by reason of its location at the bottom of the globe, in direct opposition to the known world. Ptolemy had speculated that the Indian Ocean was enclosed by just such a continent, which was joined to Africa and Asia. Other Greek writers had likewise conjectured that the southern hemisphere was broken by a continent and believed that present-day Sri Lanka possibly formed its northern tip. According to tradition, in this mysterious land were to be found the sources of the Nile River, which flowed beneath the earth's surface under a zone of scorching hot tropical seas to emerge in Africa. In the early Middle Ages, Christian churchmen rejected the whole concept of the Antipodes as being contrary to the revealed word of God, who did not make rain to fall upward, trees to grow downward or men to stand on their heads.

But with the transmission of geographic learning from the Muslim world and the experience of late medieval travelers like Marco Polo, the idea of a southern continent was rehabilitated among Europe's leading scholars until it became an article of faith. In contemporary thinking, such a landmass centered on the South Pole was considered necessary for geographic symmetry, in order to counterbalance the continents in the northern hemisphere and prevent the earth from toppling over. Some Europeans also believed that the Antipodes was the incredibly wealthy land of Orphir, visited according to biblical tradition by the servants of King Solomon. Still others thought it was the rich country of Beach (or Lucach) mentioned by Marco Polo. Consequently, on all surviving maps of the globe drawn after 1477, when the first printed world atlas—based on Ptolemy's work—was published at the Italian port city of Bologna, a great southern continent was depicted in one form or another. At first, these maps reflected the Ptolemaic conception of a landlocked Indian Ocean until disproved by the voyages of Diaz, Da Gama, and Magellan. Even so, Europeans continued to believe in the existence of a southern continent, or Terra Australis Incognita as it was relabeled after 1531, located somewhere in the unexplored regions of the South Pacific.

Conviction was further reinforced by tantalizing reports brought back by several expeditions undertaken shortly after 1500. The Frenchman Binot Paulmyer claimed, for example, to have been blown ashore at "Gonneville Land" when a violent storm near the Cape of Good Hope had driven his vessel badly off course in January

1504. But the country's real identity remains a mystery, for all of Paulmyer's papers and the gifts he had received from the local inhabitants that might have provided clues were lost to a pirate attack in the English Channel on his return voyage. The only surviving evidence for the expedition is a vague account that Paulmyer gave before the French naval authorities. Less dramatic, though more concrete, was Magellan's report of a land he called Tierra del Fuego, which lay on the south side of the strait named for him. The discovery of other islands in the South Pacific by Spanish navigators later in the century was seen as further evidence for the existence of a continent of which everyone was certain. That belief in what a modern scholar has referred to as "one of the most tenacious fictions of history" would persist for another two hundred years before being demolished by the voyages of James Cook after 1768.[1]

Thus the major problem of the Pacific and its solution, writes historian J. C. Beaglehole, "is summed up in an attempt to find this *Terra Australis incognita*" into the late eighteenth century.[2] But as Beaglehole also observed, the difficulties involved in that search were greater even than those confronted by early explorers in the Atlantic. First were the physical dimensions of the great South Sea, starting with its sheer vastness (ten thousand miles in every direction), the small size of the islands scattered across its surface apart from the larger archipelagos located mostly on its western side, the unknown wind and ocean currents that had to be learned, as well as the seasonal changes on which successful navigation depended. Second were the nautical dimensions of Pacific exploration, not the least of which were the small size and limitations of European ships, their need to carry sufficient provisions for long-distance voyaging, the primitive techniques of contemporary navigation (including rudimentary charts and instruments that improved only slowly over time), the ever-present danger of scurvy, and the equally prevalent threat of mutiny. One major impediment to Pacific exploration in particular, and to maritime exploration in general, was the inability to determine longitude, in order to gauge how far a ship had sailed east and west, the best course to follow from one port to another, or the precise location of new found lands. Although latitude could be determined with reasonable accuracy, using techniques and instruments—such as the compass and cross-staff—that were available since the beginning of the fifteenth century, not until the invention of the chronometer by John Harrison in 1761 did Europeans have the kind of precision timepiece needed to calculate longitude.[3]

Such were the obstacles that faced anyone bold enough to venture into the Pacific Ocean from the days of Magellan to James

Cook, who enjoyed better maps, instruments, and ships than his sixteenth-century predecessor, to be sure, but for whom the prospect was no less daunting. Is it any wonder that before the invention and steady improvement of the compass, when distances were too great and geographic knowledge too limited to risk voyaging far from shore, that ancient and medieval men could only speculate on the existence of lands and continents south of the equator? Furthermore, if Portuguese seamen had trembled to go beyond Cape Bojador from fear of the unknown, if for similar reasons Columbus's crew nearly mutinied after just two months' sailing on the uncharted waters of the open Atlantic, one can only imagine how Magellan's men felt after three months at sea, alone on the Pacific, with no land in sight and subsisting on meager rations of stale bread and putrid water, as their expectations of finding Asia "just over the horizon" from the New World crumbled into ruin.

The Spanish Lake, 1525–1606

By the mid-sixteenth century, the world was becoming a smaller and more familiar place. Europeans had sailed over most of the major oceans, and although much of what lay in the interior of the great continents remained a mystery for another three hundred years or more, at least their geographic outlines were being mapped with increasing precision by successive generations of maritime explorers and cartographers. Consequently, not only were the mass and general contours of Asia, Africa, and the Atlantic seaboard of the Americas charted with more or less accuracy, but Spain and Portugal (followed eventually by the English, French, and Dutch) had also established colonies in the Far East and the New World. Meanwhile, long-distance voyages across the Atlantic and around the Cape of Good Hope to Asian ports had become almost routine, if still hazardous. Only the Pacific remained largely unknown, apart from portions of its perimeter.

Coincidentally, most of that known perimeter was held by Spain, which also claimed exclusive navigation in the seas southwest of the Philippines, as far as Cape Horn, by both right of ownership since 1513 and the old legal principle of "closed seas." Hence, for all practical purposes the Pacific was viewed as a Spanish lake during most of the sixteenth century, and the Spanish Crown intended to keep it that way. By 1542, it claimed, or controlled directly, the whole west coast of the Americas from Cape Mendocino in present-day California to the Strait of Magellan, which was jealously guarded

against foreign intrusion by Spanish warships. Across the Pacific, the Philippines served as Spain's chief outpost in Asia, while at one point the royal authorities at Madrid even considered the conquest of China to secure their position. In time, claims to New Guinea and other islands discovered along the Pacific's lower rim closed the Spanish circle. Only in the north, where English, Dutch, and French mariners were attempting to locate the mythic Strait of Anian through Arctic waters, was there a potential breach. As a final measure, Spain issued and reissued a formal edict of prohibition against foreigners in this vast region of the globe five times between 1540 and 1563. The whole conception of the Pacific as a closed Spanish lake was not the simple fantasy "of a people given to grandiose visions," therefore; "in its essentials it actually was ... a realized fact."[4]

For this reason, it was no accident that exploration of the great South Sea was begun by Spain during the sixteenth century as a natural consequence of its claims to ownership. For however vital their contribution to contemporary knowledge of world geography or the various new cultures encountered along the way, these inaugural voyages were first and foremost acts of possession that affirmed Spain's control over its growing maritime empire. Initially, however, the thrust behind this ambitious policy was far narrower in scope. The goal was to reach the islands discovered by Magellan along the same path he had used, in order to establish a permanent colonial outpost or trading center there, and then to find a way back, though it took thirty years to work out a viable return passage. In the process, other islands were discovered en route.[5] Only later in the century did Spanish policy expand to include a few voyages in the South Pacific to explore for new territories. But because of the unsolved riddle of longitude, much of what was discovered on these preliminary expeditions was charted so inaccurately that it was effectively lost and only "rediscovered" in the next century or two, when navigational techniques had improved. Ultimately, however, the point to remember is that Spain remained committed to the original purpose of Columbus's voyages, which was to reach the East by sailing west.

Between 1525 and 1559, four separate expeditions were authorized by the Spanish authorities to cross the Pacific in Magellan's wake. Significantly, only one departed from Spain; the other three embarked from New World ports founded on Mexico's west coast. The first expedition sailed from the Spanish harbor of Corunna in 1525 under command of Garcia Jofre de Loyasa. Also on board was Juan Sebastian del Cano, who had served under Magellan. Retracing the late explorer's route across the Pacific, only one of the four ships

reached the Philippines after a two-year voyage from Europe, during which Loyasa and Del Cano both died of scurvy. In the meantime, Hernán Cortés, now captain-general of New Spain, organized an expedition of his own under Alvaro de Saavedra (d. 1529). Two of the three vessels that sailed from Zacatula, Mexico, in October 1527, were lost at sea. Yet Saavedra reached the Philippines, and although his voyage was otherwise undistinguished, by pure coincidence he had sailed in the right latitude of ocean at the correct season (November–January) to catch the trade winds that were essential for a successful westward passage north of the equator.[6] The problem now was to find a viable return route to Central America.

Not until 1542 was a second expedition sent across the Pacific from Mexico to explore commercial possibilities between China and the Philippines. Commanded by Ruy López de Villalobos (who named "las Felipinas" after Emperor Charles V's son and future heir, King Philip II of Spain), one of his ships also reached New Guinea, which the Portuguese might have visited as early as 1526. The first real attempt to occupy the Philippines was delayed until 1564–1565, however, when Miguel López de Legazpi (ca. 1510–1572) left New Spain with a squadron of four ships for that purpose. On the island of Cebu, Magellan's initial landfall in the archipelago, Legazpi made peace with the local natives after some skirmishing. Then in accordance with his instructions, he sent two ships in search of a return route across the Pacific. Sailing northward, the vessels encountered easterly winds near Japan that blew them along a great semicircular path back to New Spain. That four-month-long voyage pioneered the track that soon became the regular course of the famous Manila galleons, which began to trade in Chinese silks and porcelains for American silver in 1571. For almost two centuries, the annual passage between Manila and Acapulco was the world's longest unbroken trade route, which Spain endeavored to protect by cloaking the Pacific in such secrecy that no European rival could learn of its commercial networks or the galleons' rich cargoes.[7]

With the Spanish conquest of Peru and Chile, meanwhile, additional ports were established in the 1540s and 1550s at Calla, Santiago, Valparaiso, Concepcion, and Valdivia, all of which offered opportunities to explore Pacific waters south of the equator. Initial voyages offshore located the Galapagos Islands belonging to modern-day Ecuador and, farther south, the Juan Fernandez group. More ambitious plans soon followed to investigate the vast unknown region of the Pacific directly westward from South America, and to search for the Great Southern Continent that contemporaries believed to exist. The first of these expeditions sailed in 1567–1569

under Alvaro de Mendaña (1541–1595), whose route took him to the Solomon Islands deep within Melanesia. On his return voyage, he followed a course north of Hawaii and then eastward to the California coast, Acapulco and Callao. But so inaccurate was his estimate of the Solomons' geographic position because of problems inherent in contemporary navigation, that he failed to relocate the islands on his second expedition to the region in 1595–1596. Mendaña nevertheless discovered several small islands belonging to a group he named the Marquesas in honor of the viceroy of Peru, which made him the first European to encounter the land, people, and culture of a major Polynesian chain.[8] But his subsequent plan to found a colony on the island of Santa Cruz in the Melanesian archipelago collapsed when he died of malaria. Command now fell to Mendaña's chief pilot, Pedro Fernandez de Quiros (1565–1614), who took the expedition north to the Philippines and then back across the Pacific to Acapulco.

Nine years later, in 1605, Quiros was given three ships of his own with instructions to locate the Great Southern Continent. He found instead numerous island groups, including parts of modern-day Samoa, the Cook Islands, the New Hebrides, and possibly Tahiti, though no real evidence supports the latter claim. One of his lieutenants, Luis Vaez de Torres (d. 1613?), also explored the coast of New Guinea and entered the strait now named for him that separates the island from northern Australia. Convinced on the basis of these findings that he had stumbled upon territories belonging to the continent for which he sought, in May 1606 on the island of Maniculo in the New Hebrides, Quiros reaffirmed Spain's possession of all lands lying to the south. Though his "discovery" of the Terra Australis was founded upon false premises, Quiros's many landfalls not only reinforced prevailing conviction that the continent remained to be located but also influenced Pacific exploration well into the eighteenth century.

Quiros's voyage of 1605–1606 concluded a remarkable series of Spanish explorations in the Pacific. Hampered thereafter by dwindling resources, Spain adopted a defensive policy aimed at excluding all foreign intrusion into the great South Sea, still regarded as a Spanish lake. Nevertheless, during the eighty years or so following Magellan's initial voyage of circumnavigation, the contours of Spain's Pacific empire were clearly visible, not just north and south from the California coast to the Strait of Magellan, but also east and west from the shores of Mexico and Peru to New Guinea and the Philippines. Although successive discoveries had not located the Great Southern Continent or produced quantities of gold, silver, or spices as many

had hoped, Spanish galleons had begun to trade in Asian goods between Manila and Acapulco. Moreover, "through diplomatic treaty and papal bull, buttressed by exploration, conquest and settlement, Spain claimed an ocean whose lands and waters covered one-third of the surface of the globe."[9] But that claim was soon challenged.

English Privateers and Dutch Profiteers, 1574–1644

Despite every effort to maintain secrecy, the Spaniards could not prevent word of their activities in the Pacific from leaking to European rivals. At the same time, the wealth generated for Spain from its overseas possessions especially in the New World had become the envy of many European courts, where alarm was also growing at the increase in Spanish power on land and sea that this wealth afforded. Adding to these concerns was the volatile international situation created in part by the ongoing Reformation, which pitted Catholic Spain against the Protestant states of western Europe. Particularly troublesome in this respect were Spain's deteriorating relations not just with England since the accession of Elizabeth I to the Tudor throne in 1558, but with its own Calvinist Dutch subjects, whose revolt against Spanish rule—begun in 1566—became an eighty-year-long war for Netherlands' independence.

In fact, as early as the 1560s and 1570s, when England and Spain were still at peace though relations between them were growing tense, many prominent Englishmen turned their attention toward the great South Sea. All were keen to curtail Spanish power and to expand England's trade at the same time. But while some of these men urged Elizabeth I to take aggressive action against Spain's empire overseas, others proposed a more peaceful policy of exploration in the lower extremities of South America not yet colonized by Spain, in conjunction with a search for new lands in the Pacific south of the equator. For the moment, however, both appeals fell on deaf royal ears. Although the cautious queen frequently turned a blind eye to the unofficial exploits of English privateers who plundered Spanish shipping in the Caribbean, she rejected any plan that might risk open war with Spain or commit the Tudor Crown's scant resources to voyages of speculation. Besides, there was still hope that Martin Frobisher's current search for the Strait of Anian in Arctic waters would at last discover a northwest passage to China.

By 1577, however, Elizabeth appears to have changed her mind, when she consented to a privately organized expedition of five ships under the command of Francis Drake (ca. 1540–1596). Allegedly

intended to explore the southern coasts of South America on both the Atlantic and Pacific sides, the undertaking's real purpose was to raid Spanish shipping and colonies in the New World. The expedition was kept strictly secret, therefore. And although the English queen might have invested personally in the venture, Drake carried no royal commission and commanded no royal ships. Consequently, when he embarked from Plymouth in November 1577, his fleet sailed without official recognition.

Despite an unusually easy passage through the Strait of Magellan, by the time Drake reached his first rendezvous point on the coast of Chile a year after leaving England, only his flagship *Golden Hinde* remained of the five vessels that had sailed from Plymouth under his orders. Two had been lost even before entering the strait, while a third had disappeared and a fourth had returned to England after their separation from Drake's flagship in a severe storm they had encountered on entering the Pacific. The same tempest had blown the *Golden Hinde* southward, past the western entrance to the Strait of Magellan and into an unknown archipelago of islands near the tip of Tierra del Fuego. This incident resulted in the only significant discovery of Drake's voyage, for it indicated that the south shore of the strait was not the northern rim of a great landmass as Magellan and others had supposed, though this did nothing to discourage contemporary belief in the existence of the Great Southern Continent.

Heading north, Drake preyed upon Spanish settlements along the Pacific coast of South America and captured all the ships he could find, including one vessel laden with twenty-six tons of silver and two others carrying Chinese silks and porcelains that had been off-loaded from the Manila galleon. Drake also took care to seize Spanish pilots, charts, and other navigational aids that revealed, among other geographic features, the transoceanic trade route to the Philippines. The captured charts proved immediately useful, for with the Spanish authorities on guard up and down the coasts of South America, any hope of returning to England through the Strait of Magellan evaporated. Instead, Drake sailed northward beyond the limits of Spanish territory to the vicinity of present-day San Francisco, hoping to locate the entrance of a northwest passage from the Pacific side. Prevented by shoals and storms from proceeding any farther in that direction, Drake turned westward in July 1579 from the coast of California (which he claimed for England as New Albion) and struck out across the Pacific, setting his course for the Moluccas. Sixty-eight days later he made his first landfall. Then, after trading for cloves on the island of Ternate, he began the six-month return voyage to England via the Cape of Good Hope. The *Golden*

Hinde finally anchored at Plymouth in September 1580, its hold laden with captured Spanish treasure.

Drake was knighted for his exploit, which the Spaniards denounced as an act of piracy. But what his circumnavigation really demonstrated was that English interests focused far more on East Indies markets than on exploration of the great South Sea. This focus was confirmed by four subsequent voyages under Edward Fenton (1582), Thomas Cavendish (1587–1589, 1591), and Richard Hawkins (1593–1594). Except for Cavendish's first expedition, however, none succeeded even in sailing through the Strait of Magellan, while Hawkins's voyage ended disastrously with his capture by the Spaniards. Following the incorporation of the English East India Company in 1600, England turned away from the Pacific for the next 160 years, as it concentrated on developing its commerce in maritime Asia via the Cape of Good Hope. And although the voyages of Drake and Cavendish had provided the English with firsthand information about Spanish commercial routes in the Pacific, of the region as a whole there was still little grasp. The emphasis, writes Glyndwr Williams, continued to lie on the margins, while "the vast spaces of Oceania remained a void and attracted little attention."[10]

Some of that void was soon filled, however, by Dutch navigators who began to explore the Pacific's western fringe under orders from the Verenigde Oostindische Compagnie (VOC), or United East India Company, founded in 1602. Like their English contemporaries, Dutch interest focused on the East Indies trade, which became part of their larger struggle for independence from Spanish rule. Even before the rebellion began against their Catholic king, Philip II, the Calvinist Dutch had enjoyed a lucrative commerce in Asian goods with Lisbon. But this commerce ceased in 1580, when Portugal became part of the Spanish empire through dynastic inheritance. A year later, the newly created United Provinces of the Netherlands declared their formal independence from Spain, though the reality was not achieved until 1648. In the meantime, the Dutch waged an aggressive war against the Iberian kingdoms, which included attacks on their possessions overseas, especially in Asia.

Hitherto, Dutch exploration had concentrated on finding a northwest or northeast passage to the Far East, though just like the Arctic voyages of England and France, their efforts in both directions had failed. Also unsuccessful due to heavy costs and casualties were two separate expeditions that sailed in 1598 for Asia via the Strait of Magellan. From these setbacks the Dutch had learned two lessons: first, that the surest route to the Indies lay around the Cape of Good Hope; and second, that success in the Asian trade required a national

effort instead of private enterprise, which had funded Dutch voyages prior to 1602. In that year, consequently, the VOC was created from a number of small syndicates joined into one large joint stock company, which was granted a monopoly charter with full powers to make war, conclude peace, and negotiate commercial agreements from the Cape of Good Hope to the Strait of Magellan.

Trade, therefore, not discovery was the VOC's objective. But the company's business interests did lead to exploration as part of the search for new commodities and markets. In both respects, the Dutch held several advantages, starting with their complete ruthlessness against any European or Asian rival. Dutch expansion was further aided by the conclusion of a Twelve Years' Truce (1609–1621) with Spain, which briefly interrupted the fighting in Europe but not overseas, where the recent treaty stipulated noninterference with Dutch trade. Thereafter, the Dutch maritime empire in Asia expanded rapidly. The Portuguese were driven from many of their trading posts on Africa's west coast, Sri Lanka, and the Moluccas by VOC forces, which also ejected the English from their toehold in the spice islands in 1625. At the same time, the company set up factories in India and elsewhere, while establishing outposts on St. Helena in the south Atlantic, at the Cape of Good Hope, and on Mauritius in the Indian Ocean to supply voyages to and from the Far East. In 1619, Batavia (modern-day Jakarta), the VOC's Asian headquarters, was founded on the island of Java, which allowed the company to dominate the Sunda Strait and Indonesia with ease, while the capture of Malacca in 1641 also brought control over the strategic sea lane between east and west Asia. This activity was aided by the discovery in 1611 of a shorter route to Java. In place of the usual course from the Cape of Good Hope northward along the African coast and across to India, which depended upon the seasonal rhythm of the southwest monsoon, Dutch ships sailed directly eastward from the Cape using westerly winds that always blew. This reduced their travel time by half.

The new route also led them directly to Australia, which the Dutch first encountered in 1605 when the VOC sent William Jansz (1570–?) to investigate commercial opportunities along the south coast of New Guinea. Embarking from the port of Bantam on Java, Jansz sailed as far as the strait named after Luis de Torres (who explored it the following year) and then crossed to the west coast of Cape York Peninsula at Australia's northern extremity. From there Jansz followed the shoreline southward to Cape Keer-Weer (Turn Again), before returning to Java in 1606. Doubtless because of his unfavorable report of the island-continent's arid and inhospitable

coast, almost a decade passed before VOC interest reawakened in this newly discovered "Southland," later renamed New Holland. Beginning in 1616, several expeditions were sent to probe Australia's western shores from Cape York in the northeast to Cape Leeuwin, the Great Australian Bight, and Tasmania in the south. All sailed with the same threefold purpose: to learn whether Southland or its adjacent regions were inhabited; to seek out new possibilities for trade; and to map the unexplored coasts for the greater safety of Dutch navigation. In the process, much of the treacherous shoreline of western Australia was charted by Dirck Hartog (1616), Frederick de Houtman (1619), Jan Carstenz (1623), François Thijssen (1627), and other merchant-captains of the VOC, who added new pieces to Dutch charts with each successive voyage. Little by little, their efforts traced the outline of an actual Southland, which was clearly extensive, even if it showed little evidence of riches or civilization. But whether this land was the Great Southern Continent that geographers dreamed of had yet to be determined.

In the meantime, the Dutch had not given up entirely on the trans-Pacific passage to Asia. On the contrary, three expeditions embarked independently from the United Provinces with the intention of taking that course. The first, a fleet of six ships under Admiral Joris Spilbergen, departed in August 1614 with instructions from the VOC to sail for the Moluccas via South America and the Strait of Magellan. Its purpose was not peaceful exploration of the great South Sea, however. Like Francis Drake's circumnavigation forty years before, Spilbergen's mission was to prey upon Spain's possessions in the New World and afterward to defend Dutch outposts in Asia against Portuguese attack. Hence, no discoveries were made during his two-year voyage. How different was the second expedition equipped in June 1614 by Isaac Le Maire and Willem Schouten (ca. 1567–1625) who, like other private Amsterdam merchants, bitterly resented the VOC's trade monopoly in Asia and sought to evade it by entering the Pacific from the east.

Having formed an independent Southern Company and obtained permission from the Dutch government to trade in the Far East, Le Maire and Schouten still faced the problem that the Strait of Magellan fell under the VOC's monopoly. Aware, however, of growing doubts in Europe—stirred partly by Drake's report of having been blown around the tip of South America—that Tierra del Fuego was part of another continent, both men believed that to the south of the strait could be found a second passage into the Pacific that lay outside the limits of VOC control. For that purpose, the new company outfitted two ships, the first commanded by Le Maire's son

Jacob (ca. 1585–1616), and the second by Willem Schouten and his brother Jan. Though one of the vessels accidentally burned while under repair along the Patagonian coast, its stores and crew were simply transferred aboard the remaining ship, the *Eendracht*, which continued its voyage southward, past the entrance of the Strait of Magellan and along the shore of Tierra del Fuego.

In late January 1616, the expedition discovered Staten Land, the Barnevelt Islands, and the southernmost point of South America, which was dubbed Cape Horn in honor of the Dutch port from which it had embarked. The *Eendracht* then sailed through the Strait of Le Maire (named for Isaac) between the Cape and the Barnevelt Islands, thus finding a new passage into the Pacific which also confirmed that Tierra del Fuego was not part of a larger continent to the south. Taking a northwesterly course, the expedition next sighted Juan Fernandez Island in March and a month later arrived at the Tuamotus chain, where the ship took on fresh food and water despite some conflict with the local natives. Continuing west and a little south, the *Eendracht* reached the Tonga archipelago, the Hoorne Islands, traced the western fringe of Melanesia up to the northern coast of New Guinea (where the Schouten Islands were named for Willem), and landed at Ternate.

The ship finally anchored at Batavia in mid-October 1616, seventeen months after leaving Europe. It is testimony to the excellent conditions aboard the *Eendracht* during the voyage that of eighty-seven crewmen, only three had died (including Jan Schouten), none from scurvy. Otherwise, the expedition actually discovered little of importance in the Pacific. Many of the island groups encountered had been found previously by Spanish explorers, only to be "lost" again because of problems with contemporary navigation. Certainly, the Great Southern Continent was not located, which was one of the expedition's chief goals. Had they succeeded, Le Maire and Schouten might have enjoyed a warmer reception at Batavia by the VOC authorities, who not only doubted their discovery of a second strait into the Pacific, but also charged them with violating the company's trade monopoly. As a result, the *Eendracht* was seized and both men were sent back to Europe under virtual arrest. Just seven years later, however, the two men were vindicated when a third expedition of eleven warships under Admiral Jacob l'Hermite embarked from the United Provinces in late April 1623. Its instructions were to sail around Tierra del Fuego via the Strait of Le Maire, whose existence was no longer disputed, and to attack Spanish ports along the coasts of Peru before crossing the Pacific to Asia. Otherwise, this third voyage contributed nothing to the story of maritime discovery.

Dutch interest in Pacific exploration languished until 1636, when it acquired new vision and new vigor under Anthony van Diemen (d. 1645), the VOC's new governor-general at Batavia. A man of exceptional ability, van Diemen planned the final and most ambitious Dutch voyages of the century. In fact, within three months of his appointment, the governor-general authorized an expedition to explore in detail the entire west coast of Australia. Although long sections of this shoreline had been investigated by previous voyages, Dutch knowledge of Southland's coastal geography was incomplete, while efforts to push beyond the limits of their earlier discoveries in the region might also reveal more islands, archipelagos, seas, or straits as yet unknown. For these purposes, the expedition of 1636 was to begin in the north at Cape York Peninsula, which the Dutch still believed was part of New Guinea, and continue southward past Cape Leeuwin and into the Great Australian Bight as far as the islands of St. Francis and St. Peter. The voyage ended prematurely, however, when its commander was killed by natives on New Guinea and his vessels returned to Batavia. A second expedition launched in 1639 met with equal failure. This time, Van Diemen sent two ships northward to investigate Spanish reports of gold-producing islands east of Japan, as well as to probe the coasts of Korea and neighboring "Tartaria" (China). But after five months of fruitless effort, the storm-tossed and scurvy-ridden vessels returned to Java, having achieved few of their goals.

Undeterred by these setbacks, van Diemen authorized two more expeditions between 1642 and 1644, both of which he entrusted to Abel Janszoon Tasman (ca. 1603–1659), an able navigator and experienced explorer who had proved his worth on previous voyages. His instructions on the first expedition were to investigate the "remaining unknown part of the terrestrial globe" located somewhere in the same latitude as Chile and Peru and additionally to survey unexplored portions of New Holland (formerly Southland) as far as the Solomon Islands.[11] In August 1642, Tasman's two ships sailed from Batavia to Mauritius in the Indian Ocean and then struck eastward toward Australia in latitude 44° S, beneath the island-continent. In November, he sighted a coast he named Anthony Van Diemen's Land (modern-day Tasmania) after the governor-general. Continuing east, he next encountered the southern island of New Zealand, whose shores Tasman followed northward in search of a passage into the South Sea. Finding none (he missed the opening of Cook Strait), from northern New Zealand he crossed the open sea to Tonga on his return voyage to Batavia via Fiji, the Solomon chain, and New Guinea.

In addition to his discovery of New Zealand, Tasman had unknowingly circumnavigated Australia which, had he realized it, might have ended all speculation about the existence of a southern continent. But the VOC authorities on Java, including Governor-General van Diemen, were unimpressed by his accomplishment. In their eyes, he had discovered nothing of value; even so, he was dispatched a second time in February 1644 with three ships to investigate the possibility of a strait between New Holland and New Guinea, and to determine whether the Gulf of Carpentaria in northern Australia was actually the opening of a passage that divided Cape York Peninsula from the rest of Southland. If so, he was to sail through it to see if Anthony Van Diemen's Land was a separate island or the southernmost extremity of New Guinea. But when Tasman found no strait, he returned to Batavia at the end of the sailing season. To the VOC, this expedition was no more successful than its predecessor had been.

When van Diemen died a year later, Dutch exploration in the Pacific died with him. The VOC never returned to New Zealand; neither did it show any further interest in Australia, whose coasts were not fully mapped until 1801–1803. The company's refusal to engage any longer in voyages of discovery was a purely business decision. Exploration was unprofitable; moreover, because exploration was always subordinate to the VOC's commercial interests, it was expendable when there was no return on investment. Unlike the Spaniards, however, the Dutch shared their discoveries with the rest of Europe in the certainty that the new information offered little prospect of immediate commercial advantage to their trading rivals. Nevertheless, by building upon the earlier work of Spanish and Portuguese navigators, Dutch voyages in Pacific waters between 1600 and 1644 had added considerably to geographic knowledge of the East Indies, which were charted with ever greater precision. They had also explored half the coast of New Guinea and nearly three sides of Australia, found a new strait in the great South Sea at the island-continent's southeastern tip, and discovered New Zealand.[12] Yet much more remained to be done.

The Fallow Years, 1644–1764

During the 120 years that followed Tasman's last voyage, European attention to Pacific exploration was distracted by continental affairs as the leading naval and colonial powers fought each other in a long succession of conflicts that were waged increasingly on a

global scale, to be sure, but which preoccupied England, France, Spain, and the United Provinces, and consumed their resources. Consequently, not until the end of the Seven Years' War in 1763 brought a lengthier period of European peace could these contenders redirect their energies to Pacific exploration once again. In the interval, however, not all activity had ceased in the great South Sea. Some progress was made in the work of discovery, particularly by three men from very different walks of life: William Dampier (ca. 1652–1715), Jacob Roggeveen (1659–1729), and Vitus Bering (1681–1741).

Born in England, Dampier went to sea at the age of sixteen, served in the Royal Navy against the Dutch, and settled in the West Indies in the early 1670s. Perhaps bored with private life or eager for quick riches, in 1679 he joined a party of buccaneers with whom he crossed the Isthmus of Panama to the Pacific, where he signed aboard the *Cygnet* under Captain Shaw. After pillaging Spanish ships and settlements along the west coast of South America in the company of other privateers, in 1686 the *Cygnet* crossed the Pacific from Mexico to Guam and cruised the waters around the Philippines in search of other Spanish prizes. The ship then headed southward toward the spice islands, there to prey upon the Dutch. In January 1688, the *Cygnet* touched upon the northwest coast of New Holland, making it the first English vessel to reach Australia, where the crew spent five weeks exploring the shoreline.

By 1691 Dampier was back in England, having circumnavigated the globe. Seven years later, he published an account of his adventures, *A New Voyage Round the World*. An immediate best seller, the book was exceptional for the almost scientific scope and precision of Dampier's observations. When combined, moreover, with a summary of Tasman's voyages printed in English in 1694, Dampier's work reignited interest in finding the Terra Australis Incognita. Specifically for that purpose, the former buccaneer was commissioned by the Royal Navy to lead a government-sponsored expedition in 1699. In command of the *Roebuck*, Dampier had planned to reach the east coast of New Holland via Cape Horn, but severe storms forced him to go by way of the Cape of Good Hope. Finally making landfall at Shark Bay, he traced the Australian coastline northeast for several weeks until changing course for Timor and New Guinea, which, he discovered, was separate from the island of New Britain by a strait later named for him. After stopping briefly at Batavia for some badly needed repairs to his ship, Dampier began the long return voyage to England. The *Roebuck* became so unseaworthy en route, however, that he abandoned it at Ascension in the south Atlantic and reached home in 1701 aboard an English naval vessel.

Dampier ventured twice more into the great South Sea before his death. In 1703–1705, at the beginning of a new European war over the Spanish succession, he commanded a privateering expedition to the Pacific coast of South America, for which he carried a naval commission, though the voyage was sponsored by a group of London merchants. In 1708–1711, he served as pilot aboard a second privateering expedition under Woodes Rogers, also outfitted by English merchants, to harry Spanish shipping in the South Pacific and East Indies. Because of the purpose for which they sailed, neither expedition contributed to contemporary geographic knowledge of the great South Sea. In fact, the only point of interest common to both voyages was the rescue of Alexander Selkirk, a mutinous seaman who had been marooned on Juan Fernandez Island in 1704 during the earlier of the two expeditions, only to be saved from his isolation in 1709 by the later one.

William Dampier circumnavigated the globe four times. More significant still was the effect produced by his writings. Not only did *A New Voyage Round the World* (1697), *A Discourse of Trade Winds* (1699), and *A Voyage to New Holland* (1703) herald a scientific approach to the work of discovery that characterized the voyages of the late eighteenth century, but more immediately they stimulated renewed interest in Pacific exploration among his contemporaries. One response was commercial, and specifically the foundation of the South Sea Company (1711) that failed spectacularly when the famous South Sea Bubble burst in a frenzy of stock market speculation a decade later. A second response was political, as England, France, and other maritime powers challenged the monopolistic claims of Spain and the United Provinces to ownership of the Pacific, East Indies, and Australia in a series of wars also fought in European possessions overseas. A third response was literary, as Daniel Defoe, Jonathan Swift, and other writers drew upon the experience of contemporary navigators for such novels as Defoe's *Robinson Crusoe* (1719), based upon the real-life adventures of Alexander Selkirk, and *Captain Singleton* (1720), and Swift's *Gulliver's Travels* (1726). The latter two stories were set largely in Pacific or Asian waters. For all these reasons, wrote J. C. Beaglehole, the work of William Dampier was "fundamental to all future discovery."[13]

Despite renewed interest, however, there were only two other Pacific voyages of any real significance in the first half of the eighteenth century. To be sure, the European naval powers continued to export continental conflicts to their colonial possessions overseas, which resulted, for example, in Commodore George Anson's famous circumnavigation of 1741–1744 during the War of the Austrian Succession

(1740–1748). But such expeditions contributed nothing to discovery; neither did the great trading companies, which were less concerned with exploration at this time than with defending their commercial monopolies from encroachment by outsiders. Jacob Roggeveen's voyage in 1721–1722 to search for the Great Southern Continent on behalf of the Dutch West India Company (est. 1621) was all the more exceptional, therefore, because it departed from prevailing patterns.

Twice before, in 1696 and 1717, an expedition had been proposed for this purpose to the VOC, but the proposals had come to nothing. It was probably for this reason that Roggeveen, a former councilor in the VOC who had retired from service with a personal fortune, approached the Dutch West India Company with a new plan, inspired partly by the earlier explorations of Pedro Fernandez de Quiros, Abel Tasman, and William Dampier. The company, which held a commercial monopoly on the Atlantic and Pacific coasts of the Americas, not only responded to the new project but also gave Roggeveen command of three ships, which sailed from the Dutch port of Texel in August 1721.

After touching at the Falkland Islands in the south Atlantic, the small fleet passed through the Strait of Le Maire beyond latitude 60° S, in order to swing around Cape Horn more easily. From the evidence of icebergs, ocean currents, and flocks of birds along the way, Roggeveen was convinced that the Terra Australis existed and that it extended to the South Pole. Turning northward to Juan Fernandez Island, which he thought should be settled as a supply base for voyages from Europe by way of the Strait of Magellan, he continued his search for the southern continent. Instead, he discovered Easter Island in 1722, named for the day on which it was sighted. In addition to describing the friendliness of the local natives and their distinctive tattoos, Roggeveen observed colossal stone figures that dotted the hillsides near the shore. Leaving the island, he continued west to the Tuamotus chain and then northward above the Society Islands toward Java via Samoa, New Guinea, and the Moluccas. In late September 1722, he anchored at Batavia, where the VOC authorities immediately impounded Roggeveen's two ships on charges that he had violated the company's monopoly. The explorer and his remaining crew were returned to the United Provinces under guard, having failed either to discover the Great Southern Continent or to prove its nonexistence.

The only other important voyage during the first half of the eighteenth century was sponsored by Peter the Great (Tsar Peter I) of Russia, who authorized the first Kamchatka expedition (1725–1730) under Vitus Bering, a Danish captain serving in the imperial navy. The purpose was to explore Russian Siberia's Pacific coast to

determine whether it and modern-day Alaska were connected by land. As early as 1566 vague reports of a strait separating the two continents had been made, though several Russian expeditions as late as 1696 had passed the Bering Sea (as it was later called) to North America without sighting it. Eager to continue the exploration of Siberia and to establish an Arctic trade route to China and India, the tsar wanted to know if such a strait existed.

In 1725, Bering crossed overland through Siberia to the mouth of the Kamchatka River, where he oversaw the construction of a small ship to investigate the Siberian coastline as far as the Gulf of Anadyr. Continuing northward, he sailed through the strait that now bears his name beyond the Arctic Circle, where heavy fog prevented him from sighting the Alaskan coast. Nonetheless convinced that there was no land connection to North America, Bering returned to Kamchatka. Not long after, he led a second, or Great Northern Expedition (1733–1740), of thirteen ships and six hundred men to continue exploration of Siberia's Arctic and Pacific coasts as far north as the Kuril Islands. As a by-product of that undertaking, in 1740–1741 with two vessels, Bering turned east again, rounding the Kamchatka Peninsula to Avacha Bay, where his ships became separated.

Now sailing alone, in mid-July the Danish explorer sighted Alaska and afterward investigated Kodiak Island, the Kenai Peninsula, and the Aleutian chain. In November, however, disaster struck when Bering's ship ran aground. Over the next few weeks, as his crew constructed small boats from the wreckage to reach the Siberian mainland, scurvy set in and Bering died along with eighteen of his men. Yet his death had not been in vain, for his voyages had established definitively the existence of a strait between Asiatic Russia and the northeast extremity of North America, while contributing substantially to contemporary geographic knowledge of the north Pacific, which had not been a focus of European attention hitherto. He had also paved the way for Russian settlement of the Aleutians and Alaska over the next century.

Pacific Exploration in an Age of Science, 1764–1800

With the end of the Seven Years' War in 1763, and the advent of a longer period of peace than Europe had known since the mid-seventeenth century, the maritime powers were free once more to engage in voyages of exploration. In Great Britain and France especially, there was a burst of renewed interest in the Pacific Ocean, as they redirected their ancient national rivalry into a race for the Terra

Australis Incognita and whatever else they could find. Having lost to Britain much of its colonial empire in Canada, India, and the Caribbean during the recent conflict, France was particularly eager to restore its damaged prestige and to establish a new French empire overseas. This ambition was enough by itself to reinvigorate Britain's strategic interest in the great South Sea.

Yet another key motive for both contenders developed from a rapid increase in scientific curiosity about the natural, physical world, and its different human cultures. This element of Pacific exploration was already evident in the Great Northern Expedition of Vitus Bering in 1733–1740, which was accompanied by a German naturalist from the Russian Academy of Science to study the flora and fauna of Siberia. But the role of science in Pacific exploration became especially prominent in the British, French, and Spanish voyages of the second half of the eighteenth century, sometimes as a pretext for discovery, yet more often as an integral aspect of these well-organized, state-sponsored expeditions. Perhaps Captain James Cook (1728–1779) captured the union of science, exploration, and human curiosity best when he wrote in 1770 during his first Pacific voyage that although he had little hope of making any valuable discoveries, "nevertheless it must be allowed that the Sciences will receive some improvement therefrom, especially Navigation and Geography." For despite the many vicissitudes that afflicted exploration in unknown regions of the world,

> Was it not for the pleasure which naturally results to a Man from being the first discoverer, even was it nothing more than sands and Shoals, this service would be insupportable especially in far distant parts, like [the Pacific], short of Provisions and almost every other necessary. The world will hardly admit of an excuse for a man leaving a Coast unexplored he has once discover'd.[14]

The renewal of European interest in the great South Sea was also aided, meanwhile, by major improvements in navigational technique and ship design, which increased the chances for the success of lengthy voyages. In 1714, for example, the British government founded the Board of Longitude and, by Act of Parliament, offered a prize of £20,000 for a solution to this navigational problem. The resulting invention of precision instruments such as the sextant (1757), which allowed a more accurate determination of latitude; the chronometer (1761), which kept exact time; and improved compasses, which were less susceptible to magnetic variation, helped to reveal the secret of longitude and permitted pilots to calculate a ship's geographic position with precision. The gradual increase in

size, carrying capacity, and maneuverability of oceangoing vessels, coupled with advances in hygiene to prevent disease and food supply to prevent scurvy, further allowed for healthier crews. These refinements enhanced the safety of ever-longer voyages, despite the still hazardous conditions encountered in unknown waters. With so many improvements in seafaring, by 1760 the moment had come to tackle the mysteries that remained in remote and hitherto unexplored portions of the world's great oceans, starting with the Pacific.

Of these mysteries, the riddle of the Great Southern Continent was the most persistent, though even before the major Pacific voyages began after 1764, interest in locating this land of legend had steadily revived. Inspired, for example, by the publication in 1663 of a book that included Binot Paulmyer's 1504 discovery of Gonneville Land, together with the voyages of Dampier and Roggeveen, a Frenchman named Pierre Bouvet de Lozier sailed in 1739 in search of Paulmyer's lost discovery, which he associated with the Terra Australis. All he sighted, however, was a headland far to the southwest of southern Africa. Finding no other evidence of Gonneville Land, Bouvet planned to continue east, past the Cape of Good Hope and then south of New Holland, before returning to France via Cape Horn. But when his crew refused to undertake such a long voyage, Bouvet was forced to sail home by the Atlantic route. Not until 1771 did another French navigator, Yves de Kerguelan-Trémaric, renew the search for Gonneville Land in the south Atlantic and the southern part of the Indian Ocean. But his only discovery was an uninhabitable island midway between Africa, Antarctica, and Australia now named for him.

Despite these early setbacks, interest in locating the Terra Australis intensified by midcentury among amateur and professional geographers who were more convinced than ever of the continent's existence. Particularly influential in this regard was the publication in 1756 of the *History of Navigation to the South Lands*. This was a study of previous explorations into the world's southern latitudes by French scholar Charles de Brosses (1709–1777), who had developed an interest in geography. Basing his conclusions upon Paulmyer's account of Gonneville Land and other reports like it, De Brosses made the "scientific" argument—built partly upon the old medieval plea for geographic symmetry—that the legendary continent had to exist somewhere in the southern hemisphere to counterbalance the landmasses in the north. In the process of writing, De Brosses also coined the terms "Australasia" (in reference to the legendary continent) and "Polynesia" (in reference to the island groups of the South Pacific). Although not translated immediately, in 1766 the first volume of an English-language version appeared under a new title, *Terra Australis*

Cognita, which its "author," John Collander, claimed as his own work. Both books caught the interest of many English readers, but especially Collander's appeal for Britain to acquire the Great Southern Continent and the vast resources it allegedly contained.

Around the same time, Alexander Dalrymple (1737–1808), a Scottish merchant and seafarer who had worked for the English East India Company, compiled a survey of discoveries made in the Pacific Ocean up to 1764. In the course of his reading on the subject, while still serving in India on company business, he had come across a hitherto unknown Spanish account of Luis Vaez de Torre's 1607 voyage through a strait between New Guinea and New Holland. This find slowly convinced Dalrymple that the southern continent existed, a conviction further reinforced by bits of evidence he collected from the reports of other voyages. Returning to England in 1765, two years later he published *An Account of Discoveries in the South Pacifick Ocean previous to 1764*. In what one modern scholar has called "a remarkable display of theorizing from little evidence," the book asserted that portions of the Great South Land, which must extend 5,323 miles from east to west and have a population of 50 million, had been "discovered" already, on the east side by Spanish explorer Juan Fernandez, in the west by Tasman, and elsewhere by others.[15] It only remained to locate the intermediate parts. Not only did this argument find a large, sympathetic audience in Great Britain, here also "was the final spur to exploration in the South Pacific."[16]

Yet even before Collander and Dalrymple published their works, in 1764 the British and French authorities had begun a new series of state-sponsored expeditions to the Pacific, performed by naval officers under royal commission. The first of these voyages was that of veteran naval captain John Byron (1723–1786), aboard HMS *Dolphin* (1764–1766). His instructions were to discover unknown lands in the South Sea and, ultimately, to locate a strait to Hudson Bay and the Atlantic Ocean somewhere along North America's Pacific coast in the region above Drake's New Albion, or else return via the Cape of Good Hope. Touching first at the Falkland Islands, which he claimed for the British Crown, he rounded Cape Horn and sailed north to Juan Fernandez Island. At this point, Byron ignored his instructions to hunt for a Northwest Passage in the vicinity of California and headed northwest across the Pacific instead, passing above Samoa toward Guam and the Ladrones group before setting his course for home by way of Africa. The expedition was largely a failure, therefore, as it had discovered little or nothing of value.

In 1766–1768, the *Dolphin* set sail again, this time under Captain Samuel Wallis (1728–1795), who had explicit orders to search

for the Great Southern Continent. He was accompanied by a veteran of Byron's expedition, Philip Carteret (d. 1796), aboard the *Swallow*. After passing through the Strait of Magellan, however, the two ships became separated and so continued their voyages alone. Prevented by bad weather from sailing for the high southern latitudes as instructed, Wallis changed course to the northwest and, during his voyage across the Pacific, discovered Tahiti, one of the most idyllic South Sea islands. Otherwise, he accomplished nothing of note. Nor did Carteret, who looked in vain for islands reputed to exist near the Juan Fernandez group. Finding no trace of them, he too struck out across the Pacific, discovering Pitcairn Island and the Admiralty Islands, and relocating the Santa Cruz group, which had been discovered (and subsequently lost again) in 1568 by Alvaro de Mendaña. By this time, the *Swallow*'s condition was so rotten that Carteret only managed to reach home via the Cape of Good Hope with great difficulty. He also had found little of significance. So apart from making some small contributions to contemporary knowledge of Pacific geography, this second British expedition into the South Sea was no more successful than Byron's had been.

Neither was that commanded by Louis-Antoine de Bougainville (1729–1811), a French nobleman and naval officer who set sail for the Pacific aboard the frigate *La Boudeuse* in November 1766, just three months after Wallis had departed from England. With him also sailed two scientists to study the flora, fauna, geology, and native societies encountered during the voyage. Bougainville's instructions were to proceed by the south Atlantic into the Pacific, and thence to the East Indies. Ultimately, his purpose was to find the Terra Australis. After passing through the Strait of Magellan with some difficulty, he began a fruitless search for the legendary landmass. But finding no trace of it, Bougainville set his course for Tahiti, which he immediately claimed for France despite the fact that Wallis had annexed the island to Great Britain only eight months before.

From Tahiti, Bougainville sailed to Samoa and shortly after rediscovered the islands of Espiritu Santo first sighted in 1606 by Pedro Fernandez de Quiros. This group the French explorer promptly rechristened the Great Cyclades, which James Cook later renamed the New Hebrides. Bougainville then made for the east coast of Australia, but was prevented from approaching the shore by a line of shoals and reefs now named for him. He thus turned north into a maze of islands off the southeastern tip of New Guinea, which he dubbed the Louisiades in honor of King Louis XV, before continuing on to Batavia via the Solomons, New Britain, and finally, home around the Cape of Good Hope. He reached France in mid-March 1769. Like Byron,

Wallis, and Carteret, Bougainville had rediscovered much but had found comparatively little that was either new or significant, though he returned from his voyage with more than three thousand new species of plants and animals. Moreover, to the distress of other mariners, his charts were so vague as to be of scant use, despite his own complaints about the complete ignorance of naval matters among "fine style writers," who "take great care to cut back every detail that has to do with navigation and that could help to guide navigators" whenever editing sailors' journals for publication.[17] Hence, Bougainville's circumnavigation met with only modest success, while belief in the Terra Australis persisted because no ship had yet sailed deeply enough into the South Pacific to prove or disprove its existence.

By 1768, however, the British Admiralty was planning to do just that: to resolve the mystery of the Great Southern Continent once and for all by sending a carefully prepared expedition on a more southerly course in the Pacific than had been attempted hitherto. In order to conceal these plans from Britain's maritime rivals, especially France, the Admiralty found a useful pretext for the voyage in a request from the Royal Society for aid in observing the Transit of Venus across the sun's surface, which was predicted for 3 June 1769. This astronomical event was important to science for calculating the distance between the earth and the sun. As a subterfuge, it was also "heaven sent . . . to allow [the British] to carry on a series of voyages designed to forestall the French in general and Bougainville in particular."[18] At first, the Admiralty considered giving command of the new expedition to Alexander Dalrymple. But when he demanded supreme authority over the venture, a role prohibited by Admiralty regulations, the choice fell upon James Cook, who would prove to be the greatest of all Pacific explorers.

Publicly, Cook's instructions were to proceed to Tahiti to record the Transit of Venus, but secretly he was ordered to continue his voyage in search of the Terra Australis. At the same time, he was to report in full upon any new lands discovered and to bring back specimens, drawings, surveys, and maps. To assist with that purpose, the expedition was to be accompanied by two astronomers, an artist, and the botanists Sir Joseph Banks (1743–1820), a wealthy and influential gentleman naturalist, and Dr. Daniel Solander (1733–1782), a Swede who had studied under Carl Linnaeus, the father of modern botany. These specialists and all their scientific equipment were to sail with Cook aboard HMS *Endeavour*, a sturdy little collier refitted specifically for the journey. The pursuit of science would become an essential feature of all Cook's voyages; indeed, his ships were in this respect floating laboratories.

Cook left Plymouth on 26 August 1768 bound for the Pacific Ocean via Cape Horn. He reached Tahiti in April 1769, in plenty of time to prepare for the Transit of Venus. Like most early European visitors, the captain was overwhelmed by the friendliness of the islanders and surprised by their relaxed attitude toward life in general and sexual relations in particular—outlooks that were altogether different from the rigidly moralistic Christian viewpoint. But while very accepting of, and intrigued by, the Polynesian way of life, he never grew accustomed to the constant pilfering of tools, weapons, nails—in short, anything the natives could carry away—of which he complained constantly in his journals as the single greatest fault of these otherwise open, honest, and gentle people. For the rest, he was remarkably sensitive to their culture, in which he took a keen interest and that he described in meticulous detail.

Its scientific observations on Tahiti completed, the *Endeavour* next sailed westward on 13 July to the Society Islands, which Cook discovered, charted, and named for the Royal Society, before turning southward in search of the Terra Australis in the latitudes where it allegedly lay. But finding no trace after weeks of sailing back and forth, during which his skepticism increased that the continent actually existed, Cook turned north again to New Zealand, which he discovered was composed of two islands divided by a strait later named for him. After circumnavigating the islands and charting their shores with remarkable precision, Cook sailed for the east coast of New Holland, and on 29 April 1770 entered Botany Bay, so-called for the number of specimens Banks and Solander collected there. Continuing up the coast of New South Wales into the Great Barrier Reef toward Cape York Peninsula, the *Endeavour* was almost lost, but for Cook's resourcefulness, when it ran aground on the coral. After two months of repairs, the ship sailed for Batavia via the Torres Strait and then homeward around the Cape of Good Hope. It anchored at Plymouth on 13 July 1771.

Although Cook had not located the Great Southern Continent as hoped, the logs, journals, charts, scientific specimens, drawings, and paintings that were collected during the expedition represented an exceptional record of a remarkable voyage. Moreover, the captain had fulfilled his instructions to the letter, even returning to England with a sound ship and a healthy crew free from the ravages of scurvy. This was only a beginning, however, for Cook made two further voyages into the Pacific, one in 1772–1775 that conclusively disproved the existence of the Terra Australis, and the other in 1776–1779 to continue the search for a Northwest Passage in the vicinity of the Bering Strait. In the process, he discovered much and sailed farther

into the South Pacific than anyone had done before, crossing the Antarctic Circle three times in search of the legendary continent. Finally concluding in January 1775 that the "extensive coast, laid down in Mr. Dalrymple's Chart of the Ocean between Africa and America, and the Gulf of St. Sebastian does not exist," he nevertheless speculated from the evidence of ice floes, currents, and climatic conditions "that there is a tract of land near the [South] Pole . . . , a land of some considerable extent . . . that (supposing there is one) must lay within the Polar Circle"—in a word, Antarctica.[19]

In addition to giving Europeans their first accurate geographic picture of the South Pacific in all its vastness, during his three voyages Cook also relocated the Marquesas, which had not been sighted since Alvaro de Mendaña's second voyage in 1595, explored the New Hebrides and New Caledonia, surveyed large portions of the virtually unknown north Pacific from modern-day British Columbia through the Bering Strait, and stumbled upon Christmas Island and the Hawaiian chain (which he named the Sandwich Islands). There he was killed in 1779 during a quarrel with the natives over a stolen ship's boat. Finally, he had conquered scurvy through his care and attention to nutrition aboard ship, by laying in a good store of antiscorbutics such as citrus fruit, raisins, and sauerkraut (which disgusted his crews), or using local remedies like tea brewed from tree bark when low on fresh provisions. As he acknowledged with some pride in December 1778, during his final expedition:

> Few men have introduced into their Ships more novelties in the way of victuals and drink than I have done; indeed few men have had the same opportunity or been driven to the same necessity. It has however in a great measure been owing to such little innovations that I have always kept my people generally speaking free from that dreadful distemper, the Scurvy.[20]

For this achievement, Cook was elected a Fellow of the Royal Society in 1776 and awarded its prestigious Copley Medal for outstanding contributions to science.

Little remained to be done in the Pacific after Cook's three voyages, which had helped "to throw that ocean open to the world."[21] Thereafter, his successors had only to supply missing details on the map. One of these men was French naval captain Jean de la Pérouse (1741–1788?), a great admirer of Cook who tried to match his accomplishments. Dispatched on a voyage to the Pacific in 1785, La Pérouse rounded Cape Horn en route to Easter Island, Hawaii, and Alaska. He then headed south again to Monterey, California, and across the Pacific to the northeast coast of Asia, which he explored

from Sakhalin Island to Kamchatka. Returning southward to Samoa, La Pérouse next sailed to the English colony at Port Jackson near Botany Bay in January 1786, where he entrusted the governor with journals and letters for France and also took on fresh provisions before setting course for the Santa Cruz Islands. Neither La Pérouse nor his two ships were heard from again. Nevertheless, his expedition remains one of the more extraordinary Pacific voyages of the late eighteenth century, while La Pérouse, like Bougainville, is among the few explorers who compares favorably with James Cook.

Shortly after, French admiral Bruni d'Entrecasteaux (1737–1793) took command of an expedition to search for his missing countryman. He had additional instructions to conduct a thorough survey of the Australian coast, Van Diemen's Land (Tasmania), and New Caledonia. Finding no trace of La Pérouse, d'Entrecasteaux not only carried out the remainder of his instructions, he also investigated the Solomon Islands, which had been misplaced on maps ever since their discovery in 1568 by Spanish navigator Alvaro de Mendaña. Then, after cruising along the west coast of Australia, visiting New Zealand, and discovering the Entrecasteaux Island east of the Solomon chain, the admiral sailed for France by way of Batavia, where he fell ill and died from a combination of scurvy and dysentery.

The last two voyages of significance into the Pacific occurred at the beginning of the final decade of the eighteenth century against a backdrop of international dispute over rival commercial and territorial interests along the northwest coast of North America, from present-day Oregon and British Columbia to Alaska. That dispute, called the Nootka Sound Crisis, brought Spain and Great Britain to the brink of war in 1789. Initiating the crisis was Spain's growing concern over French, British, and Russian expeditions into the South Sea, which the kingdom still regarded as a Spanish lake. Spurred on by Russian activity in Alaska, the royal authorities at Madrid ordered the colonization of northern California in 1769 to secure their territorial possession. They also dispatched several expeditions to explore the coasts from San Francisco Bay northward, under Juan Pérez (1774), Juan Francisco de la Bodega y Quadra (1775), and Ignacio de Arteaga (1779) in order to assert Spanish claims, assess the extent of Russian settlement in Alaska, and intercept Cook's ships during his third voyage in search of a Northwest Passage. In addition to their political purposes were added scientific curiosity, as all three expeditions carried botanists and artists to study and collect specimens of the regional flora and fauna. Finally, in 1789 the Spaniards took formal possession of Nootka Sound on present-day Vancouver Island, expelling the British merchants who traded furs there with the local natives.

It was against this background that the voyages into the Pacific northwest of Alejandro Malaspina (1789–1795) and George Vancouver (1791–1795) occurred. Because Malaspina (ca. 1755–1810) was commissioned to undertake a scientific expedition to circumnavigate the world, his two ships included botanists, ethnographers, and artists. Malaspina was also to evaluate the status of Spanish possessions in the Americas and to reassert Spanish claims in the South Sea. A veteran of Captain Cook's third voyage, Vancouver (1757–1798) was similarly directed to survey the northwest coast of North America in support of British fur-trading interests there, to continue the search for a western entrance into the Northwest Passage, and to resolve the diplomatic crisis with Spain on behalf of the British Crown. In late August 1792, Vancouver's two ships entered Nootka Sound, where he negotiated a satisfactory settlement with the resident Spanish commander, Bodega y Quadra, and with Malaspina, who had arrived shortly before the Englishman. Following this peaceful resolution of the Anglo-Spanish dispute, Malaspina continued his mission by charting the coasts of Washington, Oregon, and California before crossing the Pacific to Guam, the Philippines, New Zealand, and Australia. He then retraced his path across the Pacific for his homeward voyage to Spain via Cape Horn in 1795. Meanwhile, Vancouver spent two summers (1791–1792) exploring the North American coast between Alaska and San Diego, before sailing homeward by Cape Horn. He reached England in September 1795 and published an account of his expedition in 1798, just a few months before his death at the age of forty-one.

Although Alejandro Malaspina did not circumnavigate the globe as instructed, having departed from and returned to Spain around the tip of South America, his five-year voyage complemented the earlier expeditions of Cook, Bougainville, and La Pérouse. In addition to the information collected on the flora, fauna, and native cultures of the Americas, which was conducted in the prevailing spirit of scientific inquiry that characterized all the major voyages of the late eighteenth century, he was the first to map the Pacific coasts of North and South America with precision. As for George Vancouver, in addition to proving conclusively that no Northwest Passage linking the Atlantic and Pacific Oceans existed south of the Bering Sea, he also established British claims to the Oregon coast, British Columbia, and Vancouver Island by means of his detailed surveys of the North American shoreline. Subsequently, the charts he produced of the Lower Columbia River would aid the Lewis and Clark expedition (1803–1806) in the final stages of its journey overland through the territories just recently

acquired for the United States by President Thomas Jefferson as part of the Louisiana Purchase.

Notes

1. John Dunmore, *French Explorers in the Pacific*, 2 vols. (Oxford: Clarendon Press, 1965), 1:3.

2. J. C. Beaglehole, *The Exploration of the Pacific*, 3rd edition (Stanford: Stanford University Press, 1966), 9–10.

3. Ibid., 10–12.

4. William L. Schurz, "The Spanish Lake," *Hispanic American Historical Review* vol. 5, no. 2 (May 1922): 184.

5. Daniel A. Baugh, "Seapower and Science: The Motives for Pacific Exploration," in Derek Howse, ed., *Background to Discovery: Pacific Exploration from Dampier to Cook* (Berkeley: University of California Press, 1990), 6–7.

6. Glyndwr Williams, *The Great South Sea: English Voyages and Encounters, 1570–1750* (New Haven: Yale University Press, 1997), 4.

7. Schurz, "The Spanish Lake," 106.

8. The original name given to the chain was Las Islas de Marquesas de Mendoza, which was simplified over time to its modern name, the Marquesas.

9. Glyndwr Williams, *The Great South Sea,* 12.

10. Ibid., 47.

11. Beaglehole, *Exploration of the Pacific*, 143.

12. Ibid., 163–164; Williams, *The Great South Sea*, 65.

13. Beaglehole, *Exploration of the Pacific*, 177–178.

14. Philip Edwards, ed., *The Journals of Captain Cook* (London: Penguin, 1999), 168, 333.

15. Lynn Withey, *Voyages of Discovery: Captain Cook and the Exploration of the Pacific* (Berkeley: University of California Press, 1987), 45.

16. J. Holland Rose, "Captain Cook and the South Seas," in Robert G. Albion, ed., *Exploration and Discovery* (New York: MacMillan, 1965), 86.

17. Friday, 1 January 1768, John Dunmore, trans. and ed., *The Pacific Journal of Louis-Antoine de Bougainville, 1767–1768* (London: Hakluyt Society, 2002), 24. Instead, Bougainville continued, these authors "want to make a book that appeals to the silly women of both sexes and end up writing a book that every reader finds boring and no one finds of any use."

18. A. Carey Taylor, "Charles de Brosses, the Man behind Cook," in *The Opening of the Pacific: Image and Reality* (London: National Maritime Museum, 1971), 13.

19. Edwards, *Journals of Captain Cook*, 411–412.

20. Ibid., 595.

21. Rose, "Captain Cook and the South Seas," 89.

EPILOGUE

The great Age of Discovery effectively closed with the voyages of Alejandro Malaspina and George Vancouver into the north Pacific Ocean, not because Europeans suddenly lost interest in exploring remote regions of the globe or finding new lands and new human cultures hitherto unknown to them, but because Europe became embroiled after 1789 in the political and military convulsions of the French Revolution and the subsequent rise of Napoleon Bonaparte. For a generation or more, national energies and resources were expended across the continent on a new series of wars that ultimately transformed the face of Europe but in the meantime distracted attention away from voyages overseas, except for strategic advantage or colonial protection. During the same period, European society began to experience profound social, economic, and demographic change caused by the developing Industrial Revolution that hit full stride after 1815, but the effects of which were already being felt in 1800.

By that date, however, much of the work of maritime discovery had been accomplished. European mariners had sailed all the world's great seas and had established new shipping lanes that linked the societies of the Indian, Atlantic, and Pacific Oceans through trade, cultural contact, and in some places conquest followed by colonization. In the process, the contours of almost every continent on earth had been explored and mapped with ever-greater precision, providing Europeans with an increasingly accurate geographic understanding of the globe. But these results had completed only the first phase of activity that led eventually to Western domination of the world by the close of the nineteenth century. For with few exceptions, notably in the New World where much of South America had been subdued, colonized, and brought into the European system by Spain, and where long segments of the Atlantic seaboard had been settled by English and French colonists from Georgia in the south to Quebec, Acadia, and Newfoundland in the north, Europeans were still confined to the ports and peripheries of Asia, Africa, North America, and Australia. The interiors of these great continents had yet to be explored.

To be sure, a few overland expeditions under Henry Kelsey (1690–1692), Anthony Henday (1754–1759), and Alexander MacKenzie (1789–1793), to name three, had penetrated the Canadian hinterland west to the Rocky Mountains and north to the mouth of the MacKenzie River. Similarly, portions of what later became the southwestern United States had been investigated as far as the Grand Canyon by a handful of Spanish explorers, such as Francisco Vasquez de Coronado (1540–1542), though the first American expedition across the continent to the Pacific coast had to wait until 1803, when Meriwether Lewis and William Clark were commissioned by President Jefferson to undertake the journey. But in 1800, the vast interior of North America was almost completely unknown. The same was true of large portions of inner Asia, where such exotic places as Samarkand, Bokhara, and Tashkent along the ancient Silk Road had not been visited by Europeans since the late Middle Ages if ever (as in the case of the mysterious land of Tibet), and still remained the stuff of legend. Even Siberia, which the Russians had conquered and colonized by the mid-seventeenth century, was to western Europe not just an unknown land but also a closely guarded secret of the tsars, who had yet to exercise effective control over this enormous region of the globe.

European influence and knowledge were similarly limited elsewhere. The island empire of Japan, for example, was still closed to the West, except for the Dutch East India Company, which, since 1637, had been allowed to send two trading ships annually to the port of Nagasaki, in partial reward for Dutch aid in crushing a rebellion of Japanese Catholics converted by Spanish and Portuguese missionaries. Meanwhile, the twin obstacles of climate and disease continued to protect the interior of Africa, the so-called Dark Continent, against European intrusion. Only later in the nineteenth century would men like Sir Richard Burton, John Speke, and David Livingstone begin to unlock its secrets in their search for the lost mines of King Solomon or the source of the Nile River, among other goals. In the Pacific region the pace of incorporation into the European system moved more quickly because of the general passivity of the indigenous peoples and the compact size of their islands, which were claimed, cultivated, settled, and in many places Christianized by Europeans.

Thus only in embryonic form were the effects of Western civilization felt for good or ill in most inhabited parts of the globe by 1800. The full realization of European hegemony would not begin until the mid-nineteenth century, when the larger processes of social, political, and economic change wrought by the French and Industrial Revolutions transformed Western views of the world and the West's place within it. Perhaps as early as 1815, but almost certainly by the time of Britain's victory over China in the First Opium War (1839–1842), the old motives of gold, God, and personal glory, which had inspired the initial voyages of discovery after 1415, had all but disappeared. What remained was the commercial impulse that lay behind the foundation of the old trading post empires of the sixteenth

and seventeenth centuries, and the spirit of scientific inquiry that had characterized the voyages of the late eighteenth century, though in much altered form. Different motives now emerged for European expansion overseas, as Great Britain, France, Russia, and even the United States, together with a few smaller countries like Belgium and the Dutch Netherlands, inaugurated a new Age of Imperialism that was driven by intense national rivalry for territorial acquisition particularly in Africa and Asia, the unbridled exploitation of colonial possessions for their raw resources, and the often brutal subjugation of indigenous peoples. All this activity was justified by notions of the "white man's burden," with its claims to racial and cultural superiority, which were accompanied by a belief in Europe's civilizing mission to spread the benefits of Western culture to every corner of the earth. Where industrialization provided the physical means for imperial success, nationalism provided the motive energy and inspiration. These two isms, the historical circumstances of their birth, and the consequences they produced represent the real division between the older Age of Discovery and the dawn of a new Imperial Age in terms of motives and objectives.

Biographies: Personalities of the Age of Discovery

Pietro Martire d'Anghiera (1457–1526) was an Italian historian of the Spanish voyages of discovery. Together with Bartolomeo de las Casas, he was the first historian of the Americas. He was born in Arona, near Anghiera, on Lake Maggiore in Italy. At Rome in 1477 he became acquainted with Don Inigo Lopez de Mendoza, Count of Tendilla, a sea captain and the Spanish ambassador to Rome. Pietro Martire accompanied the count to Zaragoza in northeastern Spain in 1487 and entered the service of the queen as a teacher at the court. He soon became a notable figure as a lecturer and a favorite of Isabella. In 1501 he was sent on a diplomatic mission to Egypt, and in 1504 he served as part of the funeral escort of Queen Isabella.

In 1511 Pietro Martire was appointed chronicler in the newly formed State Council of India, with the task of describing the voyages to the New World and what was happening there. One of his first works was a historical account of the great Spanish discoveries under the title of *Opera, Legatio, Babylonica, Oceanidecas, Paemata, Epigrammata*, published in 1511.

Pietro Martire's most ambitious work was a *History of the New World*, published in eight decades over the course of more than twenty years. The first decade was published in chapters from 1504 to 1511. It described the voyages of Christopher Columbus and others. By 1516 he had finished two other decades, the first describing the exploits of Ojeda, Nicuesa, and Balboa, the other giving an account of the discovery of the Pacific Ocean by Balboa, the fourth voyage of Columbus, and the expeditions of Pedrarias. A fourth decade was published in 1521 describing the voyages of Hernandez de Cordoba, Drijalva, and Cortés. The fifth decade, published in 1523, dealt with the conquest of Mexico and the circumnavigation of the world by Magellan. In 1524, the sixth decade gave an account of the discoveries of Davila on the west coast of America. In 1525, the

seventh and eighth decades described the customs of the natives in South Carolina, Florida, Haiti, Cuba, and Darién, and the march of Cortés against Olit.

Pietro Martire obtained much of his information for his decades from the explorers themselves. Personally acquainted with Columbus, he interviewed him and corresponded with him following his voyages. Pietro Martire himself had a firm grasp of geographical issues. For example, he was the first to realize the significance of the Gulf Stream. His decades are of great value in the history of geography and discovery. All eight decades were published together for the first time at Alcala in 1530, four years after Pietro Martire's death.

Louis-Antoine, Comte de Bougainville (1729–1811) was born in Paris to a prominent lawyer. At first destined for a legal career, he switched to mathematics, which he studied under the encyclopedist Jean le Rond d'Alembert. In 1756, the young Bougainville, who had entered the French military two years before, published a treatise on calculus, in recognition for which he was elected a fellow of Britain's Royal Society. The same year, he left for Canada as aide-de-camp to the marquis de Montcalm (1712–1759) and, after British troops took Quebec in 1759, endeavored unsuccessfully to continue the resistance from Montreal. He subsequently participated in the negotiations for the surrender of New France to Great Britain in 1760, but for distinguished service was promoted to the rank of colonel and rewarded with the chivalric Order of St. Louis.

With the end of the Seven Years' War in 1763, Bougainville conceived the idea of colonizing the Malouines Islands (in English, the Falklands; in Spanish, the Maldives), using Acadian settlers displaced from Canada. This plan was part of a larger scheme to rebuild a French overseas empire to replace the territories lost to Britain in the recent war. From 1764 to 1766 he led three expeditions to the islands, while also surveying the coasts of Tierra del Fuego, Patagonia, and the Strait of Magellan. Under pressure from Spain, the French government relinquished the Malouines to Spanish control, and in compensation for his efforts offered Bougainville the governorship of two islands in the Indian Ocean, present-day Mauritius and Réunion. He chose instead to command a state-sponsored circumnavigation of the globe, with particular focus on finding the Terra Australis Incognita in the Pacific, one of the last oceans on earth where Great Britain had yet to establish a strong naval presence. The expedition of two ships, accompanied by naturalists and astronomers, lasted from December 1766 to March 1769. Although it made few new discoveries, it successfully relocated many islands found by Spanish explorers in the sixteenth century that had been plotted incorrectly

on maps because of problems of calculating longitude without precision instruments. In terms of scientific contribution, on the other hand, more than three thousand specimens of new plant and animal species were collected, including a tropical flowering vine now known as Bougainvillea.

After returning to France, Bougainville published an account of his circumnavigation in 1771, which sold well but was ignored by French society. As a result, he was unable to complete further voyages, including one he had planned for the North Pole a year later. Instead, he was promoted to commodore and later admiral in the French navy and saw action during the American War for Independence and the French Revolution. He subsequently became a favorite of Napoleon Bonaparte, who made him a senator, count, and member of the Legion of Honor. When Bougainville died at Paris in 1811, his body was interred in the Pantheon, a distinction reserved for the greatest names in French history.

Sebastian Cabot (ca. 1476–1557) was the son of Giovanni Caboto (John Cabot, ca. 1450–ca. 1498). Born in Venice, Sebastian moved with his family to Valencia, Spain, in about 1490. Perhaps three years later, the family moved to Bristol, England, where he was probably taught the art of making charts and possibly globes by his seafaring father. At about thirteen, he accompanied his father's successful 1497 voyage, which discovered Newfoundland. Having sailed throughout the eastern Mediterranean from about 1470 to about 1480, John Cabot had speculated that the discovery of a direct route by sea west to Asia could increase profits from the spice trade by cutting out the Arab middlemen. During the 1480s, therefore, he had sought sponsorship in Spain and England for this project, at the same time that Christopher Columbus (1451–1506) was proposing a similar scheme. In 1493 Henry VII of England granted Cabot permission to explore westward across the Atlantic, though not until 1497 did a group of Bristol merchants finance the venture. Cabot's mistaken claim to have reached China secured backing for a second, larger enterprise in 1498, in which Sebastian might have participated. If so, he was among the few survivors, for with the exception of a single ship that returned to port for repairs, the expedition disappeared without a trace along the northeast coast of North America.

In 1504 and 1508, Sebastian Cabot made two more voyages to explore the American shoreline from New England to Labrador. In 1512, he not only was appointed chief cartographer to the English court by the new Tudor monarch, Henry VIII, but also was approached by King Ferdinand of Aragon to enter Spanish service as an explorer. Cabot accepted the offer, and six years later became

chief pilot—a position first held by Amerigo Vespucci (ca. 1451–1512)—at the court of Charles I (later Holy Roman Emperor Charles V), the grandson and heir of Ferdinand and Isabella of Castile. Sebastian retained this post until 1547, teaching navigation and preparing charts on the expanding Spanish empire as head of the pilot office in the Casa de la Contratación, a bureau founded by royal decree in 1503 to promote trade and navigation to the Americas. Also during this period, he met such individuals as Pietro Martire d'Anghiera (ca. 1457–1526), a prominent royal councillor and the earliest chronicler of the New World discoveries.

In 1525, Cabot led an expedition to investigate the Rio de la Plata (the modern-day boundary between Argentina and Uruguay) to determine if there was a passage to the Pacific in a more temperate latitude than the newly discovered Strait of Magellan, about which the Spanish court had just learned. Sailing with four ships and two hundred soldiers and colonists in April 1526, Cabot did his best to explore the complex of inland waterways that make up the river's estuary. But he found no trans-American route to the Pacific; his efforts to find gold and establish a colony on the Parana River also failed. Dissent among his crew forced him to return to Spain in 1530, where he resumed his duties as chief pilot. In 1547, he retired to England, where he spent his remaining years planning a northeast route to China across the top of Europe and Asia. Appointed governor in 1551 of the London-based Company of Merchant Adventurers (or Muscovy Company), he helped organize expeditions under Sir Hugh Willoughby (ca. 1500–1554), Richard Chancellor (d. 1556), and Stephen Borough (1525–1584) between 1553 and 1556. As a result of his efforts, by the time of his death in 1557, Sebastian Cabot had helped provide Europeans with a clearer idea of the extent of the New World; he had also helped initiate a search for a Northeast Passage and facilitate trade by sea between England and Russia.

James Cook (1728–1779) was the second of eight children born to parents who were farm laborers in rural England. Apprenticed at age sixteen to a dry goods merchant at the fishing village of Staithes, two years later he signed aboard the collier *Freelove* at the port of Whitby, shipping coal along England's North Sea coast. In the meantime, Cook—with just four years of formal education—studied mathematics, astronomy, and navigation on his own. On the eve of the Seven Years' War (1756–1763), he joined the Royal Navy, where his talented seamanship attracted the attention of his captain, Sir Hugh Palliser, aboard HMS *Eagle* during the Quebec campaign of 1759. Assigned to map the St. Lawrence River following the surrender of French Canada, Cook subsequently undertook coastal surveys of

Newfoundland, the Strait of Belle Isle, and the Cabot Strait. The skill with which he completed both undertakings helped to secure his first naval command of the schooner *Grenville* in 1764, on which he returned to Newfoundland two years later to observe a solar eclipse. The findings from this expedition were published in 1768 by the Royal Society of London.

By this time, Great Britain had strategic, commercial, and scientific motives for exploring the Pacific Ocean, in competition with France. Early in 1768, the British Admiralty and the Royal Society planned an expedition to Tahiti to observe the Transit of Venus, predicted for June 1769, and to find the Terra Australis Incognita, or Great Southern Continent, believed to exist in the South Pacific. Eventually, Cook was selected to command the expedition aboard HMS *Endeavour* because of his considerable experience and navigational skill, though he was not an officer. Promoted to the rank of lieutenant (he rose to captain in 1775), he completed his first expedition (1768–1772) with distinction. Two more voyages to the Pacific followed, from 1772 to 1775 and 1776 to 1779. During the third expedition, Cook was killed in a dispute with Hawaiian islanders over a stolen ship's boat. He was survived by his wife, Elizabeth, and three sons: James, Nathaniel, and Hugh.

Cook's legacy to the Age of Discovery is unparalleled. Geographically, his voyages had dispelled the myth of Terra Australis (apart from Antarctica, about which he speculated), while casting doubt on the existence of an interocean passage above North America. Scientifically, his travels had made significant contributions to contemporary knowledge of navigation, astronomy, and natural history through the plant and animal specimens that were collected. Ethnographically, his expeditions had encountered numerous Pacific cultures, which he had described empathetically in plain language, without literary pretension. Although Cook's early and middle life were poorly recorded, fortunately his last ten years were well documented through his own logs and journals and the accounts of those who served with him. He had visited, charted, and described most of the island groups in the Pacific and is credited with defining the ocean's boundaries. For these reasons, the name James Cook is synonymous with exploration.

Vasco da Gama (ca. 1460–1524) was born at the Portuguese seaport of Sines, where his father became civil governor after 1478. Early in his youth, Da Gama went to sea, and while serving in the Portuguese fleet he acquired a knowledge of mathematics and navigation. Shortly after Bartolomeu Dias (1450–1500) had rounded the Cape of Good Hope a follow-up expedition to India was planned

and Da Gama's father was chosen to command it, but the voyage was delayed for nearly a decade because of domestic politics and conflict with Spain. Interest was rekindled with the news of Columbus's discoveries in 1492–1493, followed by the Treaty of Tordesillas (1494) that awarded Portugal dominion over an eastern sea route to Asia. In 1497, command fell to the younger Da Gama (his father having died earlier the same year), as he had risen to high naval rank on his own account by this time as a member of the royal household.

With four ships and 170 men, Da Gama sailed from Lisbon on 3 July, accompanied by Dias as pilot for the initial stage of the voyage. In late November, the fleet rounded the Cape, sailed up the east coast of South Africa, and landed at Mozambique in early March 1498. Here the Portuguese met armed opposition from the local Muslim rulers, who feared Christian-European interference with their trading networks. Farther north at Malindi, however, Da Gama was well received and provided with an experienced pilot for the voyage across the Indian Ocean to Calicut, where the fleet arrived on 20 May. Despite his efforts to establish cordial relations with the port city's ruler, or Zamorin, Da Gama was opposed again by Muslim Arab merchants who dominated the city's commerce. Nevertheless, he managed to trade the cheap European goods he had brought for a modest cargo of pepper before making the long return voyage to Lisbon, which he reached in September 1499.

Da Gama made two more voyages to India. In 1502, as admiral of the Indian Sea in command of twenty ships, he conducted a naval campaign against Muslim shipping off the southwest coast of the subcontinent, bombarded Calicut, subdued neighboring Cochin, and established Portuguese outposts at Sofala and Mozambique in east Africa. In 1524, he returned to India as viceroy of Portugal's growing maritime empire in Asia. He died on Christmas Eve, soon after his arrival at Goa, the Portuguese headquarters in India. His body was shipped to Lisbon for burial. Da Gama's first expedition surpassed Columbus's voyage of 1492 as the finest feat of seamanship to that date. It took 209 days and covered a distance of more than twelve thousand miles, five times that traveled by Columbus. Da Gama was also the better navigator, for the accuracy of his charts was superior to the error-ridden efforts of the Genoese-born explorer. The results of Da Gama's voyage also stirred excitement in Europe in contrast to Columbus's disappointing discovery, for he opened a direct sea route to the riches of Asia, a goal that had fired the European imagination since the days of Marco Polo.

Richard Hakluyt (ca. 1552–1616) was born in London, educated at Oxford, and had a lifelong interest in geography and

exploration. The fervently nationalistic Hakluyt was an armchair geographer who never traveled farther than Paris. An eminently modest man, little is known about him apart from his work. He is buried in an unmarked grave at Westminster Abbey. He wrote with great pride about English navigators and argued that geographical knowledge would benefit the country. His work helped create public pride in England's maritime achievements and rouse interest in English colonization of North America.

In 1570, Hakluyt was elected one of two Westminster Queen's Scholars to Christ Church College at Oxford. He remained there for thirteen or fourteen years and made many contacts with other geographers, including Mercator. He became a clergyman in the Church of England, being ordained a deacon in 1577 and a priest in 1580. One of Hakluyt's personal goals at Oxford was to read all the available accounts of exploration and discovery. His first book, published in 1582, was a contribution to that genre. *Divers Voyages touching the Discovery of America and the Lands adjacent unto the same, made first of all by our Englishmen, and afterwards by the Frenchmen and Bretons* described English exploration of the New World, emphasizing England's preeminence in the enterprise. As a result of this work, in 1583 Hakluyt was appointed chaplain to Sir Edward Stafford (1535–1603), English ambassador to the French court.

While in France, Richard Hakluyt wrote *A Particular Discourse Concerning Westerne Discoveries*, which promoted colonization of North America as a way to alleviate problems of unemployment and overpopulation. He also undertook the task of collecting information on the Spanish and French voyages to America. He found a multitude of accounts of voyages of discovery by nations other than England and thereafter made it his life's work to correct that imbalance by researching and writing about English voyages. The best known of the resulting works was *Principal Navigations, Voiages, Traffiques, and Discoveries of the English Nation*, published in 1589, the year after England's defeat of the Spanish Armada. The work is a compilation of various personal accounts of English sea captains and explorers, though it embroiders the truth at times to emphasize England's contribution to exploration and discovery. It was later revised and republished in three volumes, 1598–1600. A few copies of the revised work included a now very rare map drawn on the Mercator projection.

The bulk of Hakluyt's other work consists of translations and compilations. A translation of Laudonnière's *Histoire notable de la Florida* was published in 1587, and in 1601 Hakluyt edited a translation from the Portuguese of Antonio Galvano's *Discoveries of the*

World. He also served as an adviser to the East India Company, supplying them with maps and offering information about markets.

John Harrison (1693–1776) was an English horologist and inventor of the first accurate marine chronometer. He embarked upon his life's work of perfecting a marine chronometer when in 1714 the British Board of Longitude announced a prize of £20,000 for the person who could devise a method of measuring a ship's longitude anywhere on earth to an accuracy of half a degree (thirty minutes of longitude). At that time, a knowledge of longitude was necessary to navigate a ship accurately and to plot accurate maps of the new lands that were being discovered.

The system of latitude and longitude was developed in antiquity, and Ptolemy's *Geographia* included the coordinates of various places so that cartographers could plot their maps. The prime parallel for latitude was easily set at the equator, with smaller concentric circles of latitude drawn to the poles. Longitude was a more difficult problem, since the lines were not parallel, but rather converged at the poles. At sea, the problem was even more acute. Various methods were devised to measure longitude, but none was accurate.

Scientists in England began attacking the problem of longitude in the mid-seventeenth century, founding for that purpose the Royal Society of London for the Promotion of Natural Knowledge. Various proposals were made, including that of using clocks. At the time, however, a clock had not been developed that could keep accurate time aboard ship. Shifts in temperature and air pressure and the motion of the ship all adversely affected a clock's ability to keep the correct time.

John Harrison perfected a seaworthy timepiece in 1727. His clock had a special pendulum that was designed to eliminate the effects of temperature changes. In 1735, John Harrison completed the first of several chronometers, each of which he made smaller and more accurate. He designed the instrument with a clock set to the time in Greenwich, England, site of the prime meridian, or 0° longitude. It could be carried on a ship and read at noon local time to determine the ship's longitude. Since the earth revolves 360° in twenty-four hours, or 15° per hour, the time difference multiplied by fifteen gave the ship's longitude.

Harrison's fourth chronometer, finished in 1759, was carried in a trial across the Atlantic Ocean from England to Jamaica and back in 1762. Harrison's clock was found to have an error of only one and a quarter minutes of longitude, which far surpassed the requirements for the prize. The Royal Society and the Board of Longitude were unwilling to give Harrison the award, however, arguing that it might have

been chance that his chronometer worked. There were also many members of the Royal Society who still hoped to win the prize themselves. Harrison did win the award in 1763, but did not receive the prize money until 1773, after King George III intervened on his behalf.

Alvaro de Mendaña (ca. 1541–1595) was born in Spain but little is known of his life before 1567, when he commanded his first expedition of two ships. Its purpose was to explore the South Pacific west of Peru for the Terra Australis Incognita, a legendary continent of unimaginable wealth associated with King Solomon and the biblical lands of Orphir and Tarshish. Inspiration for the voyage came from Mendaña's second in command, Pedro Sarmiento de Gamboa (ca. 1530–ca. 1592), a cosmographer, amateur mathematician, and student of Inca history who had been to Chile and Peru in 1557. According to tradition, an Inca emperor had voyaged to the west and found two islands from which he returned laden with treasure. Sarmiento believed these islands lay near the Terra Australis, somewhere west of Tierra del Fuego. But because Sarmiento was under investigation by the Inquisition for his interest in magic, the viceroy of Peru gave command of the expedition to his nephew, Mendaña, who thus became among the earliest Europeans to search for the Terra Australis, the discoverer of many new islands, and the first to attempt colonization of the South Pacific.

Sailing west from Callao in November 1567, the two ships encountered the Elice Islands after eighty days at sea, having passed between the Marquesas and the Tuamotu chain without sighting either. A month later, Mendaña came upon a second island cluster and what appeared to be a large landmass, which he named Santa Isabel in honor of the voyage's patron saint. Although further investigation revealed it to be an island, Mendaña was convinced that Santa Isabel was near the Terra Australis, and he called the island group the Solomons in reference to the Old Testament lands. After some exploration of the archipelago, the expedition sailed northward to the present-day Marshall Islands, before heading homeward across four thousand miles of the Pacific to the Santa Barbara Islands on the California coast. It reached Peru in early 1569.

Because Mendaña had found no gold, the Spanish authorities ignored his discoveries until 1595, after Francis Drake (ca. 1540–1596) and other English privateers had raided Spanish shipping along the South American coast. In order to find new lands to colonize and use as naval bases, Mendaña sailed on a second voyage with four ships and 378 people, including soldiers, settlers, and Pedro Fernandez de Quiros (1565–1614) as second in command and chief pilot. After a month at sea, the fleet encountered an island group in July, which

Mendaña named the Marquesas after the viceroy of Peru. The ships then searched vainly for the Solomons, which Mendaña had plotted incorrectly on his previous voyage because of the difficulties of calculating longitude with the primitive instruments of the day. Finally making landfall in the Santa Cruz chain, Mendaña attempted to found a colony. But after a mutiny and Mendaña's death from fever, the settlement was abandoned and the colonists sailed for the Philippines under the command of Quiros. The survivors reached Manila in November 1595, ravaged by scurvy.

Gerardus Mercator (1512–1594), the Flemish geographer, cartographer, and mathematician, was born in Rupelmonde, Flanders, in present-day Belgium. He studied at the University of Louvain, where he was an apprentice of Gemma Frisius (1508–1555). Mercator established himself as one of the most renowned cartographers of the Renaissance, as well as a maker of cartographic instruments. He is associated with the Mercator projection, a map projection especially suited for navigation.

Mercator produced his first map, of Palestine, in 1537. In 1538, he published a map of the world drawn on a double-heart projection. This was the first map to identify North and South America as separate continents. In 1541, he completed a terrestrial globe and later added a celestial counterpart. In 1544, he was convicted of heresy, partly because of his Protestant beliefs and partly because of suspicions aroused by his wide travels in search of data for his maps. He spent seven months in prison, and in 1552 he moved to Duisburg to escape further persecution. He was appointed surveyor and cosmographer to Duke Wilhelm V of Jülich-Cleve-Berge. This appointment inspired him to embark on a series of works on geography, cosmography, and mathematics. Among these was a version of Ptolemy's *Geographia*, published in 1578. He devoted himself to creating maps of Europe and other parts of the world, the first of which used contemporary information to correct errors on Ptolemy's maps. He was the first to use the word *atlas* to describe a collection of maps of the world, and his own atlas was published in parts from 1578 until 1595, the year after his death.

Marco Polo (1254–1324) was a Venetian traveler and author whose account of his travels offered Europeans a firsthand description of Asian lands and cultures and stimulated interest in trade. He was the son of Niccolo Polo, a merchant, who with his brother Maffeo, first journeyed to China between 1260 and 1269. They became acquainted with the Mongol emperor, Kublai Khan (1214–1294), who requested that they bring one hundred scholars to teach his people about the West. To ensure the Polos' safe travel to and from

Europe, the Khan gave them golden tablets bearing his inscription, which served as passports and authorized the travelers to receive food, lodging, and other necessities throughout the Great Khan's dominions.

In 1271, when Marco Polo was seventeen, he joined his father and uncle on their second journey through Asia. He entered the service of Kublai Khan and traveled on various diplomatic assignments to the Mongol empire, India, China, and Burma. Many of the places Marco Polo visited were not seen again by Europeans until the nineteenth century. He was amazed by China's enormous power, great wealth, and complex social structure. The Polos remained at the Khan's court for seventeen years, acquiring great wealth. They wished to return to Venice for fear that if the elderly Kublai Khan died, they might be unable to move their fortune out of the country. The Khan reluctantly agreed to let them return after they escorted a Mongol princess who was marrying a Persian prince. The arduous sea journey to Hormuz took two years, and upon their arrival they learned of the death of Kublai Khan. The power of the golden tablet continued to ensure their safe passage, however. They finally arrived at Venice in 1295.

In 1298, Marco became involved in a naval conflict with Genoa. He was captured and imprisoned for a year, where his stories of his adventures caught the attention of the romance writer Rustichello, who transcribed and published them as *The Travels of Marco Polo*. Despite some skepticism over its authenticity, *Travels* became one of the most popular books in medieval Europe and exercised great influence on European readers. Merchants drew inspiration from the account when they planned commercial ventures, and cartographers looked to it for information about Asian lands. Some of Polo's information was incorporated into maps of the later Middle Ages. Portuguese mariners studied *Travels* when they decided to seek a sea route to India in the fifteenth century, and Christopher Columbus relied heavily upon the work when planning his own voyage to Asia by sailing west from Europe.

In 1299, Marco Polo was released from prison and returned to Venice. He remained there until his death in 1324, at which time he still owned a quantity of cloths and brocades of silk and gold, exactly like those mentioned in his book, together with other precious objects. Among the items was the golden tablet that had been given him by the Great Khan.

Ptolemy (Claudius Ptolemaeus) (ca. 85–165) was a Greek astronomer, geographer, and mathematician generally believed to have been born in Upper Egypt and to have lived in Alexandria. He made

astronomical observations from Alexandria during the years A.D. 127 to 141, and from these observations compiled data for use in both celestial and terrestrial cartography. He wrote during a time when geographical knowledge was expanding under the Roman Empire, from the British Isles to Africa to Asia, resulting in a need for new maps. Ptolemy's most influential works were the *Almagest*, a thirteen-book treatise on mathematics, astronomy, and celestial cartography, and the *Geographia*, an eight-book work on terrestrial cartography.

The *Geographia* was a manual for mapmakers, and an important part of Ptolemy's legacy for Renaissance Europe and the Age of Discovery was his interest not only in the contents of a map but also in the process of mapmaking. Ptolemy's view of the world was geocentric, and he believed that the earth could be divided into four quadrants. He was aware that the earth is a sphere, and his was the first known projection of the sphere onto a plane. By listing coordinates of major places in terms of latitude and longitude, Ptolemy believed that any cartographer would be able to construct a map of the inhabited world. Ptolemy's are the only such coordinates surviving from antiquity. His values for latitude were in error by up to 2°; longitude was even worse because there was no reliable method to determine geographic longitude, a problem that remained until the invention of the chronometer near the end of the eighteenth century.

Ptolemy tried to locate as many as possible of the known places in the world, even if exact coordinates were not known. Rather than leaving blank the regions for which data were not available, Ptolemaic maps sketch in boundaries for Terra Incognita (unknown land). Maps drawn from Ptolemy's coordinates are therefore inaccurate in many places, especially outside the Roman Empire, but his methods were sufficiently accurate to satisfy the needs of astronomers and navigators until the time of the great explorations.

The most important of Ptolemy's maps published in the early period of European printing were the world maps that accompanied various editions of the *Geographia*, the earliest of which date only from about 1300, after the text was rediscovered by Maximus Planudes (ca. 1260–1330). In the fifteenth century, Ptolemy's *Geographia* began to be printed with engraved maps. The translation of the *Geographia* into Latin in the early fifteenth century brought Ptolemy's influence to European cartography. It became the authority for Renaissance mapmakers who used Ptolemy's instructions in constructing their own maps. Christopher Columbus owned a copy of the *Geographia* and referred to Ptolemy's methods for determining latitude. Ptolemy's errors in exaggerating the size of Asia and in

underestimating the earth's circumference perhaps led Columbus to believe that Asia lay much farther east than it really did. This might have been a consideration in Columbus's decision to sail west for the Indies.

Pedro Fernandez de Quiros (1565–1615) was born in Portugal, but at the age of fifteen his family moved to Spain and became naturalized subjects. As a youth, Quiros entered maritime service under the Spanish Crown, traveling to Peru in 1591 and sailing aboard the Manila galleons that crossed the Pacific Ocean between Mexico and the Philippines. In time, Quiros became an experienced navigator, and in 1595 he embarked as second in command and chief pilot under Alvaro de Mendaña (ca. 1541–1595) on an expedition into the South Pacific to search for the Solomon Islands, which Mendaña had discovered in 1568. With the latter's death from fever in the Santa Cruz Islands, Quiros took command and, under severe conditions, led the survivors of the venture to Manila in January 1596. A year later, he recrossed the Pacific to Mexico and thence to Spain, where he became tutor of geography to the son of the Spanish ambassador in Rome. Convinced that just south of the Santa Cruz archipelago discovered by Mendaña in 1595–1596 lay the legendary Terra Australis Incognita, and backed by papal support, Quiros obtained permission from King Philip III for a new expedition to the Pacific.

With three ships, Quiros sailed from Calao, Peru, in late December 1605. Taking a more southerly course than Mendaña had followed, the small squadron encountered the Tuamotu chain in January 1606 and soon after Anaa Island, two hundred miles east of Tahiti. Continuing eastward, on 1 May Quiros sighted what he thought to be the shore of a large continent and concluded that it was the Terra Australis for which he sought. This he named Australia del Espiritu Santo and claimed it for Spain, along with all other land that extended southward from that point to the South Pole. (In reality, he had found Manicolo in the New Hebrides.) For reasons that are still unclear, six weeks after attempting to establish a colony at Novo Jerusalem, Quiros abandoned Espiritu Santo for the return voyage to Mexico. Along the way, the ship under command of his subordinate, Luis de Torres, was separated from the fleet in a storm and sailed westward to explore New Guinea, as well as the strait between it and Australia (now named for Torres), before resuming the voyage to Mexico.

Quiros reached Acapulco in late November 1606 and a year later sailed for Spain, where he published an account of his voyage at his own expense. Living in poverty over the next seven years, he

at last secured royal support for another expedition to the South Pacific. Quiros died in Panama en route to Peru in late 1615. Though the lack of precision instruments at the time prevented him from accurately plotting their location with any certainty, the various island groups he had discovered kept alive contemporary belief that the Terra Australis existed until well into the eighteenth century, when the legend was finally disproved.

Abel Janszoon Tasman (ca. 1603–1659) was born in the Dutch village of Lutjegast, near Groningen. He joined the Dutch East India Company (Verenigde Oostindische Compagnie, or VOC) in 1633 and quickly rose to the rank of first mate aboard the *Weesp* and then captain of the *Mocha* (1634), a trading vessel in which he cruised among the spice-bearing Moluccas Islands on company business. He was back briefly in the United Provinces (or Dutch Netherlands) in 1637, before returning to the East Indies in 1638 under contract to the VOC in command of the *Engel*. A year later, he participated in an expedition of two ships to the North Pacific, authorized by the VOC's new governor-general at Batavia, Anthony van Diemen (?–1645). The expedition's goal was to search near the Philippines, Taiwan, Korea, and Japan for a land rich in gold and silver that was alluded to in earlier Spanish accounts. The voyage was fruitless, however, and the explorers returned to Batavia, having found nothing of commercial value and ravaged by scurvy.

But van Diemen was so impressed by Tasman's seamanship that he was placed in command of two more expeditions. The first (1642–1643) was to determine if Australia (known either as Southland or New Holland) was the northern extension of the legendary Terra Australis Incognita, to ascertain whether New Guinea was an island or an extension of Australia, and to discover a shorter sea route to the Pacific coast of South America from the southern Indian Ocean. The second expedition (1644) was to answer the still unresolved question of whether New Guinea and Australia were connected and to continue southward into the Gulf of Carpentaria to search for a possible strait through Australia to the Pacific Ocean. In the course of these two voyages, not only did Tasman discover Van Diemen's Land (renamed Tasmania in 1853), New Zealand (which he believed was the western extent of the Terra Australis), the Fiji Islands, and New Britain and New Ireland (which he mistook for a single island), but he also sailed more than five thousand miles of the southern Indian and southwest Pacific Oceans and circumnavigated Australia without knowing it. But because Tasman's discoveries had no commercial value, Governor-General van Diemen was unimpressed with these accomplishments, and Tasman received little or

no recognition at the time for his immense contribution to the knowledge of world geography.

Giovanni da Verrazano (ca. 1485–1528) was probably born to an aristocratic family from Greve in Tuscany, Italy, though he might also have been born to Italian parents living in Lyon, France. Whatever the case, Verrazano always considered himself to be Florentine. Otherwise, almost nothing is known about his early life before his first trans-Atlantic voyage in 1524, under a commission from the French king Francis I to explore the North American coast in search of a sea passage to Asia. There is a possibility that Verrazano had already visited the New World once before, perhaps in 1508, during a voyage to Newfoundland and the Gulf of St. Lawrence. In any case, Verrazano's name appears only rarely in surviving records, some of which state that in 1517 he was in Portugal and Spain in the company of Ferdinand Magellan (ca. 1480–1521) and subsequently in Egypt and Syria. As for his voyage under royal French sponsorship in 1524, the actual commission has disappeared, but surviving letters make clear the official backing of Francis I.

Embarking from the port of Dieppe on 1 January, Verrazano sailed west, hoping like Christopher Columbus (1451–1506), John and Sebastian Cabot, Miguel Corte-Real (ca. 1450–ca. 1502), and other contemporary navigators to find an all-water route to the Far East somewhere through the New World. Instead, he spent six months investigating the North American shoreline from modern-day Cape Fear, North Carolina, to Cape Breton in Nova Scotia. He claimed all this territory for France, calling it Francesca in honor of his royal patron. In 1526–1527, Verrazano undertook a second expedition for the same purpose as the first one. This time, however, the voyage was backed by a syndicate of French merchants headed by Philippe Chabot, in order to compete with a Spanish venture sent out the same year under Sebastian Cabot (ca. 1476–1557). Taking a more southerly course than before, this expedition, perhaps Verrazano's third to the New World, was troubled from the outset. Still, the explorer managed to return to France with a cargo of tropical timber from Brazil that was valued in Europe for its dye properties. A final voyage followed in 1528 with the same goal as the previous two ventures, during which Verrazano apparently explored portions of Florida, the Bahamas, Panama, and various Caribbean islands. It is also generally believed that he died on an island during this voyage at the hands of cannibals, who then ate him.

Giovanni da Verrazano was the first European to bring back a description of North America not as an archipelago of islands as many believed, but as a single large landmass. In this way,

geographers learned that the North American coast was continuous from Florida to Newfoundland. Although the names he gave to the places he saw or visited did not survive, the first map of North America was produced by his brother, the cartographer Girolamo da Verrazano, who accompanied him on his voyages.

Amerigo Vespucci (ca. 1451–1512) was born in the Italian city-state of Florence, where he was educated in astronomy, geography, and natural philosophy (i.e., science) by his uncle, a Dominican priest. Employed by the powerful Medici family in their bank for nearly thirty years, in 1492 he was sent to assist with Medici commercial interests at Seville, Spain, where he met Christopher Columbus shortly after his return from discovering the New World. According to his own account, about which there is much skepticism, Vespucci participated in the explorer's second expedition to the Caribbean. But this is unlikely, as his activities in Spain prior to 1596 are well documented.

Vespucci next claimed to have made a second voyage to the New World in 1497–1498, but no proof supports this beyond a single letter attributed to him. It is certain, however, that he embarked with Afonso de Ojeda (1460–ca. 1519) and Juan de la Cosa (d. 1511), both veterans of the early Columbus voyages, on a new expedition to explore the mainland coast of Central and South America. Vespucci subsequently alleged that when the venture's four ships became separated, and therefore reached the New World separately, he took his vessel southward as far as the mouth of the Amazon River and then turned north again to investigate the Venezuelan coast up to the islands of Aruba and Curaçao, before rejoining Ojeda, Cosa, and the rest of their squadron. But his allegation is doubtful because his itinerary does not coincide with evidence of the voyage from other sources.

The same problem clouds Vespucci's account of his third expedition to the New World in 1501–1502, this time bearing a commission from the Portuguese Crown, to follow up the discovery of Brazil by Pedro Alvarez Cabral (1467 or 1468–1520) a year before. The purpose was to determine whether the territory lay east or west of the demarcation line established by the Treaty of Tordesillas (1494). On this occasion, Vespucci claimed to have explored the South American coastline as far as 50° south latitude, which would have been the farthest point reached by any European mariner to date and just a few degrees of latitude north of the Antarctic Circle. Again, the sources disagree.

Following his return to Europe, Vespucci moved back to Spain, where he made plans for a new expedition that never sailed. In

1506, however, he was appointed the kingdom's first pilot major by royal decree for the purpose of instructing navigators bound for the Indies. He held this position until his death on 22 February 1512. It is on the strength of his claim to have discovered the South American continent in 1497–1498, prior to Columbus's third voyage, that Vespucci owes his fame. For, on a map of the globe published in 1507, in the belief that the explorer had actually found the southern part of the New World, the cartographer Martin Waldseemüller inscribed the name *America* on the image of the new continent in honor of Amerigo Vespucci.

PRIMARY DOCUMENTS RELATING TO MARITIME DISCOVERY AND EXPLORATION

While some of the documents in this section are excerpts in translation from other languages, and hence follow conventional English spelling and syntax, others have been excerpted from original sources in English. In this case, the original spelling and syntax have been retained, while the use of "[*sic*]" or the correction of a word within brackets have been inserted only where it has appeared necessary, in order to clarify the language and avoid misunderstanding.

The Portuguese Achievement

Document 1

The beginnings of Portuguese exploration and the epic voyage of Vasco da Gama are celebrated in a great national poem, *The Lusiads*, composed by Luiz Vaz de Camões (ca. 1524–1580) while he was a soldier and sailor in Asia. From the following excerpt, it is clear that the hero of this epic is not Da Gama, however, but a nation—that is, Portugal, called "Lusitania" in the poem. Hence, Da Gama's voyage, the explorations of his predecessors, and the triumphs of subsequent viceroys in Portuguese Asia were treated by Camões simply as special aspects of the glory of his country. The epic reflects Portuguese exploration as a national enterprise. (Source: *The Lusiads of Luis de Camões*, Leonard Bacon, trans. and ed. [New York: Hispanic Society of America, 1950], 3–6.)

> Arms, and those matchless chiefs who from
> Of Western Lusitania began [the shore] [Portugal]
> To track the oceans none had sailed before,
> Yet past Tapróbané's far limit ran, [Ceylon; modern-day Sri Lanka]

And daring every danger, every war,
With courage that excelled the powers of Man,
Amid remotest nations caused to rise
Young empire which they carried to the skies;

So too, good memory of those kings who went
Afar, religion and our rule to spread;
And who, through either hateful continent,
Africa or Asia, like destruction sped;
And theirs, whose valiant acts magnificent
Saved them from the dominion of the dead,
My song shall sow through the world's every part,
So help me this my genius and my art.

Of the wise Greek, no more the tale unfold, [the poet Homer]
Or the Trojan, and great voyages they made.
Of Philip's son and Trajan, leave untold [Alexander "the Great"; Emperor Trajan]
Triumphant fame in wars which they essayed.
I sing the Lusian spirit bright and bold,
That Mars and Neptune equally obeyed. [gods of war and the sea]
Forget all the Muse sang in ancient days,
For valor nobler yet is now to praise. . . .

And thou, the nobly born high guarantor
Of our old Lusitanian free estate,
And, no less certainly, fair omen for
This little Christendom that shall be great,
New terror for the lances of the Moor,
Our Century's miracle decreed by Fate,
Vouchsafed the world by God, Who all commands,
To give its better portion in God's hands. . . .

Hark! Thou shalt never see, for empty deed
Fantastical and feigned and full of lies,
Thy people praised, as with the foreign breed
Of muses that still vaunt them to the skies.
So great and true those acts that they exceed
Utterly all such fabulous fantasies,
And Rodomont and the vain Roger too,
And Roland's take, even if that were true. [chivalric hero of the *Song of Roland*]

Instead I give you Nuno grim and dire,
Whose prowess well for King and Realm was shown,

With Egas and with Fuas. Homer's lyre
I covet, for the like of them alone.
For the Twelve Peers, Magriço I desire
Among the Twelve of England shall be known,
And offer likewise Gama's noble name, [Vasco da Gama]
Who for himself snatched all Aeneas' fame. [Aeneas, the mythical hero of Troy who by tradition survived the Greek siege to found Rome]

For if, in lieu of Charles the King of France [Charles VIII]
Or Caesar, equal glory you would see, [Julius Caesar]
Mark well the first Afonso then, whose lance
Tarnished whatever foreign fame might be,
Or him who left his land the inheritance
Of freedom with his splendid victory,
Or the second John Unconquered, or, in a word, [King John II]
The fourth and fifth Afonsos, or the third.

Nor shall my verses let their memory wane,
Who once beyond the realms of morning went,
And by their good swords could such height attain
They kept your banner still armipotent:
Pacheco strong, the dread Almeidas twain, [Francisco de Almeida and his son, who died in battle against Muslim naval forces]
From whom yet Tagus grieves with sad lament, [Tagus River on which Lisbon sits]
And Albuquerque stern and Castro brave, [Afonso de Albuquerque; João de Castro, Portuguese viceroy, 1545–1548, and a leading oceanographer]
And all who 'scaped dominion of the grave.

With them I chant, who cannot celebrate
Your worth, great King, for I am not so bold,
Take in your hand the bridle of the state,
Making matter for an epic yet untold.
They feel already the tremendous weight
(The fear whereof makes the whole world grow cold)
Of hosts and deeds as splendid as may be,
On Afric's coasts or on the Orient sea.

Document 2

In his *Lendas da India*, written sometime after 1514, Portuguese author Gaspar Correa (d. 1583?) chronicled Vasco Da Gama's three voyages to Asia and his viceroyalty. Regarded by many historians as

the fullest and most accurate record of Da Gama's exploits, Correa's account of the explorer's first epic voyage to Calicut is highly detailed, and in his relation of Da Gama's initial audience with the ruling Zamorin, Correa describes the opulence of Asia that so captivated Europeans of the day, while revealing the commercial motives of the Portuguese. (Source: Gaspar Correa, *The Three Voyages of Vasco da Gama, and His Viceroyalty*, Henry E. J. Stanley, trans. and ed. [London: Hakluyt Society, 1869], 193–196.)

> When the captain-major arrived [at the Zamorin's palace], he was conducted through many courts and verandahs to a dwelling opposite to that in which the King was, beyond, in another room arranged with silk stuffs of various colours, and a white canopy, which was of subtle workmanship and covered the whole room. The king was . . . a very dark man, half naked, and clothed with white cloths from the middle to the knees: one of these cloths ended in a long point on which were threaded several gold rings with large rubies, which made a great show. He had on his left arm a bracelet above the elbow, which seemed like three rings together, the middle one larger than the others, all studded with rich jewels, particularly the middle one which bore large stones which could not fail to be of very great value; from this middle ring hung . . . a diamond of the thickness of a thumb; it seemed a priceless thing. Round his neck was a string of pearls about the size of hazel nuts, the string took two turns and reached to his middle; above it he wore a thin round gold chain which bore a jewel of the form of a heart, surrounded with larger pearls, and all full of rubies: in the middle was a green stone of the size of a large bean, which, from its showiness was of great price, which is called an emerald. . . . The King had long dark hair, all gathered up and tied on the top of his head with a knot made in it; and round the knot he had a string of pearls like those round his neck, and at the end of the string a pendant pearl pear-shaped and larger than the rest, which seemed a thing of great value. His ears were pierced with large holes, with many gold ear-rings of round beads. . . . Vasco da Gama said to the King, "Sire, you are powerful and very great above all the kings and rulers of India, and all of them are under your feet. The great King of Portugal my sovereign having heard of your grandeur . . . had a great longing to become acquainted with you and to contract friendship with you as with a brother of his own, and with full and sincere peace and amity to send his ships with much merchandise, to trade and buy your merchandise, and above all pepper and drugs, of which there are none in Portugal; . . . God has been pleased to bring me here where I now am, and, therefore, I truly believe that you are the king and ruler whom we came in search of . . . ; and I tell you, Sire, that so powerful is the King of Portugal . . . that

> after I shall have returned to him with your reply, and with this cargo which you are giving me, he will send hither so many fleets and merchandise, that they will carry away as many goods as are to be had in this city. To certify the truth of what I say, here is the letter of the King my sovereign signed with his hand and seal, and in it you will see his good and true words which he says to you." Vasco da Gama then kissed the letter and placed it upon his eyes, and upon his head, and gave it to the King with his knee on the ground; the King took it and placed it on his breast with both hands, showing marks of friendship, and opened it and looked at it, then gave it to the overseer of the treasury . . . to get it translated.

Document 3

Captured by the Portuguese in 1515, the city of Hormuz on the Persian Gulf was one of the richest and most strategic entrepôts in the networks of Asian maritime trade. That its commercial importance was recognized equally by visitors of all nationalities is clear from the descriptions left by the Chinese chronicler Ma Huan, who participated in the voyages of Zheng He; the Muslim Arab traveler, Ibn Battuta; and the English merchant, Ralph Fitch. Their separate accounts are remarkable for the similarity in their observations about the city, its markets, and its trade goods, and they attest, as well, to the wealth generated by maritime commerce throughout the Indian Ocean at Calicut, Malacca, and other trading ports. (Sources: Ibn Battuta, *Travels in Asia and Africa, 1325–1354*, H. A. R. Gibb, trans. [London: Broadway Travellers Series, 1929]. 118–119; Ma Huan, *Ying-yai Sheng-lan: The Overall Survey of the Ocean's Shores*, J. V. G. Mills, trans. [Bangkok: White Lotus Press, 1997], 165–172; "The Voyage of Mister Ralph Fitch merchant of London to Goa and Siam," Richard Hakluyt, comp., *Voyages and Discoveries: The Principal Navigations, Voyages, Traffiques and Discoveries of the English Nation*, Jack Beaching, ed. [London: Penguin Books, 1972], 254.)

Ibn Battuta on Hormuz ca. 1432

> I travelled next to the country of Hormuz. Hormuz is a town on the coast . . . and in the sea facing it and nine miles from shore is New Hormuz, which is an island. . . . It is a large and fine city, with busy markets, as it is the port from which the wares from India and Sind are despatched to the Iráquis, Fárs and Khurásán. The island is saline, and the inhabitants live on fish and dates exported to them from Basra. . . . Water is a valuable commodity in this island.

Ma Huan on Hormuz in 1433

[This port] lies beside the sea and up against the mountains. Foreign ships from every place and foreign merchants travelling by land all come to this country to attend the market and trade; hence the people of the country are all rich. The king of the country and the people of the country all profess the Muslim religion; they are reverent, meticulous, and sincere believers; every day they pray five times, [and] they bathe and practise abstinence. Their customs are pure and honest.... Their marketplaces have all kinds of shops, with articles of every description; only they have no wine-shops; [for] according to the law of the country wine-drinkers are executed.... In this place they have all the precious merchandise from every foreign country. Further, there are blue, red, and yellow [gem]stones, and red [rubies], cantharides [emeralds] ... , cat's-eyes, diamonds, and large pearls ... , coral-tree beads, branches and stems, and golden amber, amber beads, rosary beads, wax amber, black amber, ... all kinds of beautiful jade utensils, crystal utensils, and ten kinds of flowered pieces of brocaded velvet, ... woollens of every kind, broadcloth, felt, various kinds of muslins, all kinds of foreign kerchiefs with blue and red silk embroidery, and other such kinds of things—all these are for sale. Camels, horses, mules, oxen, and goats are plentiful.

Ralph Fitch on Hormuz in 1583

[H]ormuz is an island in circuit about 25 or 30 miles and is the driest island in the world: for there is nothing growing in it but only salt; for their water, wood or victuals and all things necessary come out of Persia, which is about 12 miles from thence. All thereabouts be very fruitful, from whence all kind of victuals are sent into [H]ormuz. In this town are merchants of all nations, and many Moors and Gentiles. Here is very great trade of all sorts of spices, drugs, silks, cloth of silk, fine tapestry of Persia [i.e., carpets], great store of pearls, which come from the isle of Bahrein, and are the best pearls of all others and many horses of Persia, which serve all India. They have a Moor [Muslim] to their King which is chosen and governed by the Portugals.

The Voyages of Columbus

Document 1

When Christopher Columbus laid his Enterprise of the Indies before Isabella and Ferdinand of Spain, he also presented a list of titles and rewards should he succeed in reaching Asia as promised.

At first reluctant to endorse the plan or accept his demands, the monarchs eventually relented and, in a series of capitulations, conferred on Columbus the items he requested. Just how extensive these requests were is clear from the Granada Capitulations issued on 30 April 1492. (Source: *Repertorium Columbianum*, vol. 2, *The Book of Privileges Issued to Christopher Columbus by King Fernando and Queen Isabel, 1492–1502*, Helen Nader, trans. and ed. [Berkeley: University of California Press, 1996], 66–69.)

> Sir Fernando and Lady Isabel, by the grace of God king and queen of Castile, León, Aragón, Sicily, Granada, [etc.].... Because you, Christopher Columbus, are going at our command with some of our ships and personnel to discover and acquire certain islands and mainland in the Ocean Sea, and it is hoped that, with the help of God, some of the islands and mainland in the Ocean Sea will be discovered and acquired by your command and expertise, it is just and reasonable that you should be remunerated for placing yourself in danger for our service. Wanting to honor and bestow favor for these reasons, it is our grace and wish that you, Christopher Columbus, after having discovered and acquired these islands and mainland in the Ocean Sea, will be our admiral of the islands and mainland that you discover and acquire and will be our admiral, viceroy, and governor of them. You will be empowered from that time forward to call yourself Sir Christopher Columbus, and thus your sons and successors in this office and post may entitle themselves sir, admiral, viceroy, and governor of them. You and your proxies will have the authority to exercise the office of admiral together with the offices of viceroy and governor of the islands and mainland that you discover and acquire. You will have the power to hear and dispose of all the lawsuits and cases, civil and criminal, related to the offices of admiral, viceroy, and governor, as you determine according to the law, and as the admirals of our kingdoms are accustomed to administer it. You and your proxies will have the power to punish and penalize delinquents as well as exercising the offices of admiral, viceroy, and governor in all matters pertaining to these offices. You will enjoy and benefit from the fees and salaries attached, belonging, and corresponding to these offices, just as our high admiral enjoys and is accustomed to them in the admiralty of our kingdoms.... [Furthermore,] having discovered and acquired any islands and mainland in the Ocean Sea, once you or your designated representative have performed the oath [of loyalty] and formalities required in such cases, from then on you shall be accepted and regarded for the rest of your life, and your sons and successors after you forevermore, as our admiral of the Ocean Sea and viceroy and governor of the islands and mainland that you, Sir

> Christopher Columbus, discover and acquire. . . . For with this writ we grant to you from now on the offices of admiral, viceroy, and governor as a hereditary right forevermore, and we grant you actual and prospective possession of them, as well as the authority to administer them and collect the dues and salaries attached and pertaining to each of them.

Document 2

Although Columbus composed a logbook of his initial voyage of discovery in 1492, that work has disappeared. What remains is a digest of the original manuscript made by Bartolomé de las Casas for his *History of the Indies*, published in the sixteenth century. The frequent quotation of the explorer's own words makes the digest the prime authority for the voyage itself and includes the account of Columbus's first sighting of land in the Caribbean during the night of 11–12 October. (Source: Oliver Dunn and James E. Kelley Jr., trans. and eds., *The Diario of Christopher Columbus's First Voyage to America, 1492–1493. Abstracted by Fray Bartolomé de las Casas* [Norman: University of Oklahoma Press, 1989], 57–65.)

> [Thursday, 11 October]. The Admiral steered west-southwest. They took much water aboard, more than they had taken in the whole voyage. They saw petrels and a green bulrush near the ship. The men of the caravel *Pinta* saw a cane and a stick, and took on board another small stick that appeared to have been worked with iron, and a piece of cane, and other vegetation originating on land, and a small plank. The men of the caravel *Niña* saw other signs of land and a small stick loaded with barnacles. With these signs everyone breathed more easily and cheered up. On this day, up to sunset, they made 27 leagues. After sunset [Columbus] steered on his former course to the west. They made about 12 miles each hour and, until two hours after midnight, made about 90 miles. . . . And because the caravel *Pinta* was a better sailer and went ahead of the Admiral it found land and made the signals that the Admiral had ordered. A sailor named Rodrigo de Triana saw this land first, although the Admiral, at the tenth hour of the night, while he was on the stern castle, saw a light, although it was something so faint that he did not wish to affirm that it was land. But he called Pero Gutiérrez, the steward of the king's dias, and told him that there seemed to be a light, and for him to look: and thus he did and saw it. He also told Rodrigo Sánchez de Segovia, . . . who saw nothing. . . . But the Admiral was certain that they were near land, because of which when they recited the *Salve*, which sailors in their own way were accustomed to recite and sing, all

> being present, the Admiral entreated and admonished them to keep a good lookout on the forecastle and to watch carefully for land.... At two hours after midnight the land appeared, from which they were about two leagues distant. They hauled down all the sails ... , passing time until daylight Friday [12 October], when they reached an islet of the Lucayos, which was called Guanahani in the language of the Indians. Soon they saw naked people; and the Admiral went ashore in the armed launch, and Martin Alonso Pinzón and his brother Vicente Anes, who is captain of the *Niña*. The Admiral brought out the royal banner and the captains two flags with the green cross, which the Admiral carried on all the ships as a standard, with an F and Y [the initials for Ferdinand and Ysabela], and over each letter a crown, one on one side of the cross and the other on the other. Thus put ashore they saw many green trees and many ponds and fruits of various kinds. The Admiral called to the two captains and to the others who had jumped ashore and to Rodrigo Descobedo, the *escrivano* [recorder] of the whole fleet ... and he said that they should be witnesses that, in the presence of all, he would take possession of the said island for the king and for the queen his lords, making the declarations that were required declarations, and which at more length are contained in the testimonials made there in writing.

Document 3

In 1502–1503, after returning from his third voyage to the New World, Christopher Columbus compiled his *Libro de las profecías*, a collection of biblical prophecies. Nowhere is the religious mysticism and apocalyptic vision of world history that motivated Columbus to undertake his voyages, according to his very traditional Christian outlook, more clearly expressed than in this unique work. (Source: *The Libro de las profecías of Christopher Columbus*, Delno C. West and August King, trans. and eds. [Gainesville: University of Florida Press, 1991], 105–111.)

> Most eminent rulers: At a very early age I began to navigate upon the seas, which I have continued to this day. Mine is a calling that inclines those who pursue it to desire to understand the world's secrets. Such has been my interest for more than forty years, and I have sailed all that can be sailed in our day. I have had business and conversations with learned men among both laity and clergy, Latins and Greeks, Jews and Moslems, and many others of different religions. I prayed to the most merciful Lord concerning my desire, and he gave me the spirit and the intelligence for it. He gave me abundant skill in the mariner's arts, an adequate understanding of the stars, and of geometry

and arithmetic. He gave me the mental capacity and the manual skill to draft spherical maps, and to draw the cities, rivers, mountains, islands and ports, all in their proper places. During this time, I have searched out and studied all kinds of texts: geographies, histories, chronologies, philosophies and other subjects. With a hand that could be felt, the Lord opened my mind to the fact that it would be possible to sail from here to the [East] Indies, and he opened my will to desire to accomplish the project. This was the fire that burned within me when I came to visit Your Highnesses. All who found out about my project denounced it with laughter and ridicule. All the sciences which I mentioned above were of no use to me. Quotations of learned opinions were no help. Only Your Majesties had faith and perseverance. Who can doubt that this fire was not merely mine, but also of the Holy Spirit who encouraged me with a radiance of marvelous illumination from his sacred Holy Scriptures, . . . urging me to press forward? The Lord purposed that there should be something clearly miraculous in this matter of the voyage to the Indies, so as to encourage me and others in the other matter of the household of God [i.e., a crusade to recapture Jerusalem and restore the ancient temple]. I spent seven years here in your royal court discussing this subject with the leading persons in all the learned arts, and their conclusion was that all was in vain. That was the end, and they gave it up. But afterwards it all turned out just as our redeemer Jesus Christ had said, and as he had spoken earlier by the mouth of his holy prophets. . . . The Holy Scriptures testify . . . that this world must come to an end. . . . From the creation of the world, . . . until the advent of our Lord Jesus Christ there were five thousand, three hundred and forty-three years, and three hundred and eighteen days . . . ; if we add to these years an additional one thousand, five hundred and one years of waiting, this makes a total of six thousand, eight hundred, forty-five years of waiting for the completion of the age. According to this calculation, only one hundred and fifty years are lacking for the completion of the seven thousand years which would be the end of the world according to [the Scriptures and early church fathers]. Our Savior said that before the consummation of this world, first must be fulfilled all the things that were written by the prophets. . . . Already I pointed out that for the execution of the journey to the Indies I was not aided by intelligence, by mathematics or by maps. It was simply the fulfillment of what Isaiah had prophesied, and this is what I desire to write in this book, so that the record may remind Your Highnesses, and so that you may rejoice.

Document 4

In a letter dated 16 August 1494, Ferdinand and Isabella of Spain wrote to Columbus to express their interest in the new lands he had discovered across the Atlantic, and they gave instructions on how to treat the indigenous peoples. (Source: *Repertorium Columbianum*, vol. 2, *The Book of Privileges Issued to Christopher Columbus by King Fernando and Queen Isabel, 1492–1502*, Helen Nader, trans. and ed. [Berkeley: University of California Press, 1996], 99–100.)

> Sir Christopher Columbus, our high admiral of the islands of the Indies. We have seen your letters and the reports you sent us . . . and have been very pleased to learn of all that you wrote us in them. We give thanks to our Lord for all of it because we hope that, with His help, your business will be the means by which our holy Catholic faith is augmented. One of the things that has pleased us the most about this is that it was conceived, begun, and accomplished by your command, work, and expertise. It seems to us that all of what you told us at the beginning could be achieved has turned out to be true, for the most part, as if you had seen it before telling us. . . . Nevertheless, we desire that you write us something more about how many islands have been found up to now. Of those islands you have named, what name has been given to each, because in your letters you give the names of some but not all of these, the names that the Indians call them, how far it is from one to the other, all that you have found on each one of them, including what [the Indians] say is on them, and also what has been harvested from that which was sowed after you went there, because the season has passed when all sown crops ought to have been harvested. Most of all we want to know what the weather is like there in the months of the year, because it seems to us from what you describe that there is a great difference between the seasons there and here. Some wonder if in one year there are two winters and two summers. . . . Concerning the relations that you should establish with the people [local natives] you have there, we approve of what you have begun up to now. This is how you should continue to proceed, giving them the most satisfaction possible but not giving them any license to exceed the things they are supposed to do and what you order them to do on our behalf. . . . Regarding matters with Portugal, a valid treaty has been signed with their ambassadors that seemed to us the least disadvantageous. We are sending you a transcript of the terms that were made, so that you may be well informed in detail. Consequently, it is not appropriate to elaborate on it here. Nonetheless, we order and charge you to observe it fully, causing it to be observed by everyone, just as stipulated in the articles. It seems to us that the line, or border, that is to be made is an

extremely difficult matter requiring great wisdom and trust. If possible, therefore, we would like you to locate it yourself and establish it with those who are to be involved on behalf of the king of Portugal.... From Segovia, on the sixteenth of August, [fourteen hundred] ninety-four.

The Demarcation of the Globe

Document 1

In 1627 or 1628, a Carmelite missionary named Fray Antonio Vázquez de Espinosa (d. 1630) wrote a long manuscript titled *Indiae descriptionem*, first published in English in 1942. An extensive work, it provides a detailed description of Spain's empire in the New World, based almost entirely on the author's personal inspection. In Chapter 2 of Book 1, "In Which the World Is Stated to be Round," Espinoza expressed the accepted geographical view of the earth's spherical form, which had been proved decisively by successive voyages of exploration, though its full size was still unknown. (Source: Fray Antonio Vázquez de Espinoza, *Compendium and Description of the West Indies*, Charles U. Clark, trans. [Washington, DC: Smithsonian Institution, 1942], 3–4.)

In order to continue with greater clearness and precision in the description I am writing of the West Indies, New Spain and its other dependencies, and the southern provinces of Peru, as well as the tribes which settled this New World and their different languages, it will be advisable to discuss the whole world in passing, since in practically every part of it the valiant Spaniards have conquered with invincible courage innumerable provinces, kingdoms, and nations, winning them for the monarchs of Spain.... It is well known and agreed that the world is round, since the curve the sun makes over it from E. to W. indicates the fact, even if it had not been described and discussed by so many geographers, mathematicians, and other writers; and that the parts of it are like the whole, is evident; that is shown out on the high seas, where only water and sky are seen, and the sea forms a curved horizon, visible as far as sight can reach, and the same is seen when one travels on land over a plain. The earth is the center of this visible universe, which is fixed and fastened upon itself in accordance with the disposition of Divine Providence, as is indicated by the Equinoxes.... In addition to this there are reckoned to be on earth five zones or bands: the two outermost very cold, consisting of the Arctic and Antarctic polar regions, N. and S.; the two temperate, where the sun

> reaches the Tropics of Cancer and Capricorn, keeping them as its limits, without being able to go beyond them; and the median zone of the earth, which is the equinoctial and is called the Torrid Zone. Since these are so well known and obvious, as are the parts of the world included in them which are inhabited, I would say that from the Torrid Zone to either of the Poles, Arctic or Antarctic, there are 90 degrees, of 17½ leagues each; from one Pole to the other, 180 degrees; another 180 degrees from E. to W., measured in a straight line. Thus the universe contains 360 degrees, of 17½ leagues each, making on a great circle 6,300 leagues from one Pole to the other, and from E. to W.; as for the circumference, God alone can measure it, and not human understanding.

Document 2

The Treaty of Tordesillas, prompted by the results of Columbus's first voyage, was concluded on 7 June 1494 to settle the contentious matter between Portugal and Spain of the possession of all newly discovered lands of the non-Christian world. Not satisfied with the original demarcation line established from north to south by Pope Alexander VI in the bull Inter Caetera issued in 1493, the two courts agreed to shift the line farther west. That agreement was ratified by the Spanish monarchs on 2 July 1494 and by the Portuguese monarch on 5 September the same year. (Source: John Parry and Robert G. Keith, trans. and eds., *New Iberian World: A Documentary History of the Discovery and Settlement of Latin America to the Early 17th Century*, 5 vols. [New York: Times Books and Hector and Rose, 1984], 1:275–280.)

> Don Ferdinand and Dona Isabella, by the Grace of God king and queen of Castile, Leon, Aragon, Sicily, Granada, [etc.] . . . together with . . . all members of our council, it was treated, adjusted, and agreed for us and in our name by virtue of our power with the most serene Dom John, by the grace of God, king of Portugal and of the Algarves on this side and beyond the sea in Africa, lord of Guinea, our very dear and very beloved brother, and . . . his ambassadors, who came to us in regard to the controversy over what part belongs to us and what part to the said Most Serene King our brother, of that which . . . is discovered in the ocean sea, . . . [an agreement], the tenor of which, word for word, is as follows:
>
> In the name of God Almighty, Father, Son, and Holy Ghost, three truly separate and distinct persons and only one divine essence. Be it manifest and known to all who shall see this public instrument, that at the village of Tordesillas, on the

seventh day of the month of June, in the year of the nativity of our Lord Jesus Christ 1494, ... it was declared by the ... representatives of the aforesaid King and Queen of Castile, Leon, Aragon, Sicily, Granada, etc., and of the aforesaid King of Portugal and the Algarves, etc.:

[I] That, whereas a certain controversy exists between the said lords, their constituents, as to what lands, of all those discovered in the ocean sea up to the present day, the date of this treaty, pertain to each one of the said parts respectively; therefore, for the sake of peace and concord, and for the preservation of the relationship and love of the said King of Portugal for the said King and Queen of Castile, Aragon, etc., it being the pleasure of their Highnesses, they ... covenanted and agreed that a boundary or straight line determined and drawn north and south, from pole to pole, on the said ocean sea, from the Arctic to the Antarctic pole. This boundary or line shall be drawn straight, as aforesaid, at a distance of three hundred and seventy leagues west of the Cape Verde Islands.... And all lands, both islands and mainlands, found and discovered already, or to be found and discovered hereafter, by the said King of Portugal and by his vessels on this side of the said line ... , in either north or south latitude, on the eastern side of the said bound provided the said bound is not crossed, shall belong to, and remain in the possession and pertain forever to, the said King of Portugal and his successors. And all other lands, both islands and mainlands, found or to be found hereafter, ... which have been discovered or shall be discovered by the said King and Queen of Castile, Aragon, etc., and by their vessels, on the western side of the said bound, determined as above, after having passed the said bound toward the west, in either its north or south latitude, shall belong to, and remain in the possession of, and pertain forever to, the said King and Queen of Castile, Leon, etc., and to their successors.

Document 3

In the following letter from the Holy Roman Emperor to the cardinal of Toledo, dated ca. 11 November 1540, Charles V (in his capacity as king of Spain) alerts the churchman of Jacques Cartier's third voyage to Canada. In the letter, Charles asserts Spanish claims to the New World as established by the Treaty of Tordesillas against France's intrusion on the principle that "prescription without possession availeth nothing." The letter also reveals the extent to which Spain and Portugal would go, combining forces to prevent other Europeans from challenging their respective monopolies in Asia and the Americas. (Source: Ramsay Cook, ed., *The Voyages of Jacques Cartier* [Toronto: University of Toronto Press, 1993], 141–142.)

> I have received today letters from my ambassador in France, in which he advises me that in spite of the efforts of the ambassador of the most Serene King of Portugal ... respecting the licence that [Francis I] gave to his subjects to proceed to the Indies, a certain Jacques Cartier has received a commission to equip a fleet of ships to go to the New Lands.... And although I have ordered a reply to be sent to [the Spanish ambassador] to the effect that he do continue to insist and make fitting instance that the said licence be not proceeded with, being as it is, in direct contravention of the treaty between us and the said King of France, and contrary to the grace and concession granted [in 1494] by the Apostolic See to the Kings of Castile and Portugal for the said conquest, it has appeared to me fitting to advise you thereof that you may consider and confer in Spain respecting such further measures it may now be desirable to take besides those already taken.... And it would be as well for you to send full information thereof to ... the King of Portugal ... that in the same way he may on his part take such measures as are required; and let the person who is in command of the [Spanish] fleet ... carry orders to unite with the fleet of the said King of Portugal and let each fleet give help and support to the other. And should they meet with the ships of the said Jacques [Cartier] or any other Frenchman sailing with a fleet bound to the said Indies, let them engage and destroy them, since the intention of these Frenchmen is known; and let all the men taken from their ships be thrown into the sea, not saving any one person, for this is necessary as a warning against the undertaking of similar expeditions.

A New Continent?

Document 1

In a letter written to the duke of Milan on 18 December 1497, Raimondo de Raimondi de Soncino, a ducal envoy to England, described the results of John Cabot's first voyage to the North Atlantic. In the document, the diplomat described how Cabot, following the example of Spain and Portugal, sailed in search of a westward route to China, which he claimed to have found. The letter also contained other details about what the explorer had seen, along with references to a second voyage. Clearly, Europeans had not yet accepted the fact that Columbus and his successors had found two new continents in the western Atlantic, rather than Asia. (Source: Public Record Office, Great Britain, *Calendar of State Papers and manuscripts, relating to English affairs, existing in the archives and collections of Milan*, vol. 1, no. 552 [London: Longman, 1912], 209–210.)

> Perhaps the numerous occupations of your Excellency, it may not weary you to hear how his Majesty here [Henry VII] has gained a part of Asia, without a stroke of the sword. There is in this Kingdom a man of the people, Messer Zoane [John] Cabot by name, of kindly wit and a most expert mariner. Having observed that the sovereigns first of Portugal and then of Spain had occupied unknown islands, he decided to make similar acquisition for his Majesty. After obtaining patents that the effective ownership of what he might find should be his, though reserving the rights of the Crown, he committed himself to fortune in a little ship, with eighteen persons. He started from Bristol, a port on the west of this kingdom, passed Ireland, . . . and then bore towards the north, in order to sail to the east. . . . After having wandered for some time he at length arrived at the mainland, where he hoisted the royal standard, and took possession for the king there. . . . They say that the land is excellent and temperate, and they believe that Brazil wood and silk are native there. They assert that the sea there is swarming with fish, which can be taken not only with the net, but in baskets let down with a stone, so that it sinks in the water. . . . But Messer Zoane has his mind set upon even greater things, because [on a second voyage] he proposes to keep along the coast from the place at which he touched, more and more towards the east, until he reaches an island which he calls Cipangu, situated in the equinoctial region, where he believes that all the spices of the world have their origin, as well as jewels. He says that on previous occasions he has been to Mecca, whither spices are borne by caravans from distant countries. . . . He therefore reasons that these things come from places far away from them, and so on from one to the other, always assuming that the earth is round, it follows as a matter of course that the last of all must take them in the north towards the west. He tells all this in such a way, and makes everything so plain, that I also feel compelled to believe him. What is much more, his Majesty, who is wise and not prodigal [with money], also gives him some credence, because he is giving him a fairly good provision [pension], since his return. . . . Before very long they say that his Majesty will equip some ships, . . . and they will go to that country and form a colony. By means of this they hope to make London a more important mart for spices than Alexandria.

Document 2

Although modern historians doubt the authenticity of claims made by Amerigo Vespucci (1451–1512) that in 1501 he had sailed down the South American coastline from Brazil almost to the Antarctic Circle, his account was believed in his own time. Of particular

importance was a pamphlet published in 1503, attributed to Vespucci, in which the term Mundus Novus (New World) was applied to the Americas for the first time. Written in the form of a letter to Lorenzo de' Medici, it was not only read widely by Vespucci's contemporaries but also had a major influence on the reformation of geographical opinion about what Columbus had discovered across the Atlantic. Through Mundus Novus the notion gained ground that an entirely new world had been found and that Vespucci was the first to identify it. (Source: John H. Parry and Robert G. Keith, trans. and eds., *New Iberian World: A Documentary History of the Discovery and Settlement of Latin America to the Early 17th Century*, vol. 5, *Coastlines, Rivers, and Forests* [New York: Times Books and Hector and Rose, 1984], 18–22.)

> On a former occasion [1502?] I wrote to you at some length concerning my return from those new regions which we found and explored with the fleet, at the cost, and by the command of this Most Serene King of Portugal. And these we may rightly call a new world. Because our ancestors had no knowledge of them, and it will be a matter wholly new to all those who hear about them. For this transcends the view held by our ancients, inasmuch as most of them hold that there is no continent to the south beyond the equator, but only the sea which they named the Atlantic; and if some of them did aver that a continent there was, they denied with abundant argument that it was a habitable land. But that this their opinion is false and utterly opposed to the truth, this my last voyage has made manifest; for in those southern parts I have found a continent more densely peopled and abounding in animals than our Europe or Asia or Africa, and, in addition, a climate milder and more delightful than in any other region known to us.... [The transatlantic voyage was long and stormy], but during these tempests of sea and sky, so numerous and so violent, the Most High was pleased to display before us a continent, new lands, and an unknown world.... We knew that land to be a continent and not an island both because it stretches forth in the form of a very long and unbending coast, and because it is replete with infinite inhabitants. For in it we found innumerable tribes and peoples and species of all manner of wild beasts which are found in our lands and many others never seen by us concerning which it would take long to tell in detail.... We adopted the plan of following the coast of this continent toward the east and never losing sight of it. We sailed along until at length we reached a bend where the shore made a turn to the south; and from that point where we first touched land to that corner it was about three hundred leagues.... Now, where the said corner of land showed us southern trend of the coast we agreed to sail beyond it and inquire

> what there might be in those parts. So we sailed along the coast about six hundred leagues, and often landed and mingled and associated with the natives of those regions, and by them we were received in brotherly fashion. . . . Part of this new continent lies in the torrid zone beyond the equator toward the Antarctic pole, for it begins eight degrees beyond the equator. We sailed along this coast until we passed the tropic of Capricorn and found the Antarctic pole fifty degrees higher than that horizon. We advanced to within seventeen and a half degrees of the Antarctic circle. . . . I kept a diary of noteworthy things that if sometime I am granted leisure I may bring together these singular and wonderful things and write a cosmographical or geographical work so that I may live with posterity and that the immense work of almighty God, partly unknown to the ancients, but known to us, may be understood.

The Search for a Northwest Passage

The existence of a Northwest Passage to Asia around the top of North America was the focus of much interest during the sixteenth and early seventeenth centuries. Many contemporaries were convinced that such a route existed and offered arguments in support of voyages to discover it. Although Sir Humphrey Gilbert was the leading advocate of the idea, other Englishmen also urged their countrymen to undertake the search, including Richard Willes, who wrote of "certain arguments to prove a passage by the Northwest" in the mid-1570s. (Source: Richard Hakluyt, *Voyages and Discoveries: The Principal Navigations, Voyages, Traffiques and Discoveries of the English Nation*, Jack Beaching, ed. [London: Penguin Books, 1972], 161–163.)

> Four famous ways there be spoken of to those fruitful and wealthy islands, which we do usually call Moluccas, continually haunted for gain, and daily travelled for riches therein growing. These islands stand east from the meridian, distant almost half the length of the world, in extreme heat, under the equinoctial line, possessed of infidels and barbarians: yet great abundance of wealth there is painfully sought in respect of the voyage dearly bought, and from thence dangerously brought home. The Portuguese voyage is very well understood of all men, and the southeastern way round about Africa by the Cape of Good Hope more spoken of, better known and travelled, than it may seem needful to discourse thereof. The second way lieth southwest, between the West Indies or South America, and the south continent [i.e., Tierra del Fuego], through that narrow strait where Magellan

first passed these latter years, leaving thereunto his name. The way no doubt the Spaniards would commodiously take, for that it lieth near unto their dominions there.... The third way by the northeast, beyond all Europe and Asia, that worthy and renowned knight Sir Hugh Willoughby sought to his peril, enforced there to end his life for cold, congealed and frozen to death. And truly this [route] consisteth rather in the imagination of geographers, than allowable either in reason, or approved by experience, as well it may appear by the unlikely sailing in that northern sea always clad with ice and snow, the foul mists and dark fogs in the cold climate, the little power of the sun to clear the air, the uncomfortable nights so near the Pole, five months long. A fourth way to go unto these aforesaid happy islands Molucca Sir Humphrey Gilbert a learned and valiant knight discourseth at large. But the way is dangerous, the passage doubtful, the voyage not thoroughly known.... Grant [however] the West Indies not to continue continent unto the Pole, grant there be a passage between these two lands, let the gulf lie nearer us than commonly in cards [i.e., charts] we find it set. Let the way be void of all difficulties, yet doth it not follow that we have free passage to Cathay? ... By the northeast there is no way, the southeast passage the Portuguese do hold as the lords of those seas. At the southwest Magellan's experience hath taught us the eastern current striketh so furiously on that strait, and falleth with such force into that narrow gulf, that hardly any ship can return that way.... Mr. Frobisher, who lately through all these [Arctic] islands of ice and mountains of snow, passed that way, even beyond the gulf that tumbleth down from the north, and in some places though he drew one inch thick ice, as he returning in August did, yet came he safely home again.... Our travellers need not to seek their return by the northeast [therefore], neither shall they be constrained ... either to attempt Magellan's strait at the southwest, or to be in danger of the Portuguese for the southeast: they may return by the northwest, that same way they do go forth.

The Pacific Is Sighted and Entered

Document 1

In the third book, written in 1516, of his great chronicle *The Decades of the newe worlde or west India*, Pietro Martire d'Anghiera recounted Balboa's first sighting of the Pacific Ocean, taken from the explorer's own letters of 1513, which described the event. (Source: Pietro Martire d'Anghiera, *The Decades of the newe worlde or west India*, Richard Eden, trans. [London: 1555] Third Decade, 90vo.–91.)

> Vasco Nunez [de Balboa] therefore, whether it were that he was impatient of idleness . . . or lest any other should prevent him in so great a matter . . . , or being moved by both these causes, . . . took the adventure upon him with a few men to bring that to pass that which [the natives] thought could hardly have been done . . . , and assured by the fame of greater plenty of gold, he gathered an army of a hundred fourscore and ten men. Thus being furnished and ready . . . he departed from Darien . . . , and therewith went forward on his journey by land toward the mountains. . . . By the help . . . of [native] guides and labourers, with our carpenters, he passed over the horrible mountains and many great rivers lying in the way, . . . [and] entered into a region called Quaraqua. . . . Here Balboa leaving in Quaraqua many of his soldiers (which by reason they were not yet accustomed to such travails and hunger, fell into divers diseases) took with him certain guides . . . to conduct him to the tops of the mountains . . . from which he might see the other sea so long looked for, and never seen before of any man coming out of our world. Approaching therefore to the tops of the mountains, he commanded his army to stay, and went himself alone to the top, as it were to take the first possession thereof. Where, falling prostrate upon the ground, and raising himself again upon his knees as is the manner of the Christians to pray, lifting up his eyes and hands toward heaven, and directing his face toward the new-found South Sea, he poured forth his humble and devout prayers before almighty God as a spiritual sacrifice with thanksgiving, that it had pleased his divine majesty to reserve unto that day the victory and praise of so great a thing unto him. . . . When he had thus made his prayers . . . , he beckoned with his hand to his companions to come to him, showing them the great main sea heretofore unknown to the inhabitants of Europe, Africa, and Asia. Here again he fell to his prayers as before: desiring the almighty God and the blessed virgin to favour his beginnings, and to give him good success to subdue those lands to the glory of His holy name and increase of His true religion. . . . When [Balboa] had said these words, he commanded [his men] to raise certain heaps of stones . . . [as] a token of possession. Then descending from the tops of the mountains, lest such as might come after him should [accuse] him of lying or falsehood, he wrote the king of Castile's name here and there on the bark of the trees . . . and raised heaps of stones all the way that he went, until he came to the region of the next [native] king toward the south, whose name was Chiapas.

Document 2

No sooner had Francis Drake entered the Pacific Ocean from the Strait of Magellan, than an "incredible storm" lasting fifty-two days blew his ship, the *Golden Hinde*, south and around the tip of

Tierra del Fuego into an archipelago of unknown islands. The experience led him to suspect that Tierra del Fuego was not the northern part of the Terra Australis Incognita as Magellan and others believed it was. (Source: Sir Francis Drake, *The World Encompassed* [(New York): Readex Microprint, 1966], 44–45.)

> The uttermost cape of headland of all these Islands, stands near in 56 deg. Without which there is no main[land], nor Island to be seen to the Southwards: but that the Atlantic Ocean, and the South Sea, meet in a most large and free scope. It hath been a dream through many ages, that these Islands have been a main, and that it hath been *terra incognita*; wherein many strange monsters lived. Indeed it might truly, before this time, be called *incognita*, for howsoever the maps and general descriptions of *cosmographers*, either upon the deceiveable [i.e., deceptive] reports of other men, or the deceitful imaginations of themselves (supposing never herein to be corrected) have set it down, yet it is true that before this time, it was never discovered or certainly known by any traveler, that we have heard of. And here as in a fit place . . . to remove that error in opinion, which hath been held by many, of the impossible return, out of *Mar Del Zur* [the South Sea], into the West Ocean [Atlantic], by reason of the supposed Eastern current and . . . winds: which (say they) speedily carry any thither, but suffer no return. They are herein likewise altogether deceived: for neither did we meet with any such current, neither had we any such certain winds, with any such speed to carry us through; but at all times, in our passage there, we found more opportunity to return back again into the West Ocean, than to go forward into *Mar Del Zur,* by means either of current or winds to hinder us, whereof we had experience more than we wished; . . . for besides that it cannot be said, that there is one only passage, but rather innumerable; it is most certain, that [flowing through] all these Islands, there is one large and main sea, wherein if any will not be satisfied, nor believe the report of our experience and eyesight, he should be advised to suspend his judgment, till he have either tried it himself, by his own travel, or shall understand, by other travelers, more particulars to confirm his mind herein.

Pacific Trade and Exploration, the Early Phase

Document 1

After cruising along the Pacific coast of South and Central America, preying upon Spanish ships and settlements, Francis Drake sailed past the shores of Mexico beyond the limits of Spanish control in search of a Northwest Passage and a return route home. Prevented

by storms and shoals from continuing beyond modern-day California, however, he changed course westward across the Pacific to the Moluccas, but not before he had named and claimed the land of California for Elizabeth I and England. (Source: Sir Francis Drake, *The World Encompassed* [(New York): Readex Microprint, 1966], 80–82.)

> This country our [captain-]general named [*New*] *Albion*, and that for two causes; the one in respect of the white banks and cliffs, which lie toward the sea [like those of Dover]: the other, that it might have some affinity, even in name also, with our own country, which was sometime so-called. Before we went from thence, our general caused to be set up a monument of our being there; as also of her majesty's and [her] successors' right and title to that kingdom, namely, a plate of brass, fast nailed to a great firm post; whereon is engraven her grace's name, and the day and year of our arrival there, . . . together with her highness' picture and arms in a piece of sixpence current in English money, showing itself by a hole made of purpose through the plate: underneath was likewise engraven the name of our general, etc. The Spaniards never had any dealing [with] or so much as set a foot in this country; the utmost of their discoveries reaching only to many degrees Southward of this place. . . . We departed [on] . . . July 25 [1579]. And our general now considering that the extremity of the cold not only continued but increased, . . . and the wind blowing still from the Northwest, cut off all hope of finding a passage through these Northern parts, thought it necessary to lose no time; and therefore with general consent of all, bent his course directly to run with the Islands of the Moluccas. And so having nothing in our view but air and sea, without sight of any land for the space of full 68 days together, we continued our course through the main Ocean.

Document 2

In the account of his first circumnavigation, William Dampier described the Mexican port of Acapulco and the rich trade in Asian goods from the Philippines over well-established routes since 1571 that was carried on there by means of the annual voyage of the Manila galleons. (Source: William Dampier, *A New Voyage Round the World* [New York: Dover, 1968], 170–171.)

> *Acapulco* is a pretty large Town, 17 deg. North of the Equator. It is the Sea-Port for the City of *Mexico*, on the West side of the Continent. . . . This Town is the only place of Trade on all this Coast. . . . The Ships that Trade hither are only three, two that constantly go once a Year between this and *Manila* in *Luconia* [Luzon], one of the *Philippines* Islands, and one Ship more every

> Year to and from *Lima*. This from *Lima* commonly arrives a little before *Christmas*; she brings them Quicksilver, Cacoa, and [silver] Pieces of Eight. Here she stays till the *Manila* Ships arrive, and then takes in a Cargo of Spices, Silks, Calicoes, and Muslins, and other *East-India* Commodities, for the use of *Peru*, and then returns to *Lima*. This is but a small Vessel of twenty Guns, but the two *Manila* Ships are each said to be above 1000 Tons. These make their Voyages alternately, so that one or other of them is always at the [Philippines]. When either of them sets out from *Acapulco*, it is at the latter End of *March*, or the Beginning of *April*; she always touches to refresh at *Guam*, one of the *Ladrone* Islands, in about sixty Days space after she sets out. There she stays but two or three Days, and then prosecutes her Voyage to *Manila*, where she commonly arrives some time in *June*. By that time the other is ready to sail from thence, laden with *East-India* commodities. She stretcheth away to the North as far as 36 [deg.], or sometimes into 40 deg. of North Lat[itude]. before she gets a Wind to stand over to the *American* Shore. She falls in first with the Coast of *California*, and then coasts along the Shore to the South again, and never misses a Wind to bring her away from thence quite to *Acapulco*. When she gets the length of Cape St. *Lucas*, which is the Southernmost Point of *California*, she stretches over to Cape *Corrientes*; . . . from thence she coasts along till she comes to *Sallagua*, and there she sets ashore Passengers that are bound to the City of *Mexico*: From thence she makes her best way, coasting still along the Shore, till she arrives at *Acapulco*, which is commonly about *Christmas*, never more than eight or ten Days before or after. Upon the Return of this Ship to the [Philippines], the other with stayeth there till her Arrival, takes her turn back to *Acapulco*.

Document 3

Among other places encountered on his initial circumnavigation of the globe, William Dampier was aboard the first English ship to reach Australia, in January 1688. In his account of the voyage, he recorded his observations of the island-continent's inhospitable coasts and stone-age native people. Though whether New Holland (as he called it) was the legendary Terra Australis Incognita, a separate continent, or merely part of New Guinea had yet to be determined. (Source: William Dampier, *A New Voyage Round the World* [New York: Dover, 1968], 310–312.)

> Being now clear of all the Islands [of southern Indonesia], we stood off South, intending to touch at *New Holland*, a part of *Terra Australis Incognita*, to see what that Country would afford us. . . . *New Holland* is a very large Tract of Land. It is not yet

> determined whether it is an Island or a main Continent; but I am certain that it joins neither to *Asia*, *Africa*, nor *America*. This part of it that we saw is all low even Land, with sandy Banks against the Sea, only the Points are rocky.... The Land is of a dry sandy Soil, destitute of Water, except you make Wells, yet producing divers sorts of Trees; but the Woods are not thick, nor the Trees very big.... We saw no Trees that bore Fruit or Berries. We saw no sort of Animal, nor any Track of Beast, but once.... Here are a few small Land-birds, but none bigger than a Black-bird; and but few Sea-fowls. Neither is the sea very plentifully stored with Fish, unless you reckon the Manatee and Turtle as such. Of these Creatures there is plenty; but they are extraordinarily shy; though the Inhabitants cannot trouble them much having neither Boats nor Iron. The Inhabitants of this Country are the miserablest People in the World.... [They] have no Houses, and skin Garments, Sheep, Poultry, and Fruits of the Earth, Ostrich Eggs, etc.,.... And setting aside their Humane Shape, they differ but little from Brutes. They are tall, straight-bodied, and thin, with small long Limbs. They have great Heads, round Foreheads, and great Brows.... They have great Bottle-Noses, pretty full Lips, and wide Mouths.... They are long-visaged, and of a very unpleasing Aspect, having no one graceful Feature in their Faces.... The Colour of their Skins ... is Coal-black, like that of the Negroes of *Guinea*. They have no sort of Clothes, but a piece of the Rind of a Tree tied like a Girdle about their Waists, and a handful of long Grass, or three or four small green Boughs full of Leaves, thrust under their Girdle, to cover their Nakedness.

Document 4

In 1712, the privateer Woodes Rogers published an account of his voyage round the world between 1708 and 1711. Although his expedition contributed nothing to Pacific exploration or geographic knowledge of the globe, one event of interest was his rescue of the Scottish seaman Alexander Selkirk, who had been cast away on Juan Fernandez Island during William Dampier's second circumnavigation a few years before. Rogers's description clearly gave the writer Daniel Defoe the raw material for his 1719 novel *Robinson Crusoe*. (Source: Robert C. Leslie, ed., *Life aboard a British Privateer in the Time of Queen Anne. Being the Journal of Captain Woodes Rogers, Master Mariner* [London: Diploma Press, 1894], 57–65.)

> Immediately our pinnace return'd from the shore, and brought abundance of craw-fish with a man cloth'd in goat-skins, who look'd wilder than the first owners of them. He had been on the island four years and four months, being left their by Captain

> Stradling in the ship *Cinque Ports*. His name was Alexander Selkirk, a Scotchman, who had been master of the *Cinque Ports*, a ship that came here last with Capt. [William] Dampier.... The reason of his being left here was a difference betwixt him and his captain [Stradling]. When left, he had with him his clothes and bedding, with a firelock [musket], some powder, bullets, and tobacco, a hatchet, a knife, a kettle, a Bible, some practical pieces, and his mathematical instruments and books. He diverted and provided for himself as well as he could; but for the first eight months had much ado to bear up against melancholy, and the terror of being alone in such a desolate place. He built two huts ... cover'd them with long grass, and lin'd them with the skins of goats ... , he got fire by rubbing two sticks of piemento wood together on his knees.... [For food he ate] goat's flesh, of which he made very good broth, ... ; he kept an account of 500 that he kill'd while there, and caught as many more, which he marked on the ear and let go. When his powder fail'd he took them by speed of foot; for his way of living, and continued exercise of walking and running, clear'd him of all gross humours, so that he run with wonderful swiftness through the woods, and up the rocks and hills.... [He also had] plenty of good turnips which had been sow'd there by Captain Dampier's men, and have overspread some acres of ground.... When his clothes wore out he made himself a coat and cap of goatskins, which he stitch'd together with little thongs of the same that he cut with his knife.... At his first coming on board us, he had so much forgot his language for want of use, that we could scarce understand him, for he seemed to speak his words by halves.... And by this we may see, that solitude and retirement from the world is not such an unsufferable state of life as most men imagine.... We may perceive also by his story the truth of the maxim "that necessity is the mother of invention," since he found means to supply his wants in a very natural manner, so as to maintain life.

Document 5

Although during the first Kamchatka Expedition, Vitus Bering had found no land connection between Asiatic Russia and Alaska, the Russian Admiralty was not fully convinced. Hence, in 1732 the Danish-born captain was dispatched on a second expedition to the same region, in order to verify his earlier report and make further explorations. The following is an excerpt from his new instructions. (Source: Basil Dmytryshyn et al., trans. and eds., *Russian Penetration of the North Pacific Ocean, 1700–1797* [Eugene: Oregon Historical Society Press, 1988], 96–97.)

> In accordance with the instructions from His Imperial Majesty, Peter the Great, ... instructions which he personally gave to Captain Commander [Vitus] Bering while Bering was in St. Petersburg, the expedition made a search to find whether the land of Kamchatka might be joined to America. However, as Bering reports, he followed that instruction and sailed along the land from Kamchatka north and east to 67° latitude, and as he had indicated on the map he prepared in conjunction with that expedition, there is no joining of the land in that latitude with the coast of America.... Nevertheless, it must be strongly emphasized that even though he suggests there is no juncture, this has not been proven and should not be accepted as fact. Also, it is possible to voyage along the [Siberian] coast from the Ob River to the Lena and beyond. Nothing is known about some of these places, and consequently it is impossible to describe them precisely because there are no reliable maps or reports. Further, no observations or descriptions have been made about the islands near Japan and a route to the east. Consequently, to fulfill the desire of His [late] Imperial Majesty [Peter] and to bring benefit to the Empire ... , the Admiralty College believes with Captain Commander Bering that ... a detailed observation and search should be undertaken, even though Bering has shown that the coast of Kamchatka does not appear to be joined to the coast of America. This should nevertheless be studied in detail, and the American coast should be visited by a naval expedition and explored as thoroughly as possible.

Pacific Exploration in the Eighteenth Century

Document 1

Although not the discoverer of Tahiti, Louis de Bougainville's account of the island and its inhabitants during his voyage of 1767–1778 is noteworthy for its almost utopian tone. Educated in the classics of ancient Greece and Rome, and imbued with Enlightenment ideas of the Noble Savage who lives in harmony with nature, Bougainville's praise of Tahiti and its people borders on the lyric. Captain James Cook's subsequent account of the island and its culture offered readers a far greater degree of reality, to be sure, but Bougainville's description reflected the impression formed by the earliest visitors of Tahiti as the nearest place to paradise on earth. Hence, he named the island New Cythera after the birthplace of Aphrodite, the Greek goddess of love. (Source: John Dunmore, trans. and ed., *The Pacific Journal of Louis-Antoine de Bougainville, 1767–1768* [London: Hakluyt Society, 2002], 72–73.)

> Nature has placed [Tahiti] in the finest climate in the world, embellished it with the most attractive scenery, enriched it with all her gifts, filled it with handsome, tall and well-built inhabitants. She herself has dictated its laws, they follow them in peace and make up what may be the happiest society on this globe. Lawmakers and philosophers, come and see here all that your imagination has not been able even to dream up. A large population, made up of handsome men and pretty women, living together in abundance and good health, with every indication of the greatest amity, sufficiently aware of what belongs to the one and the other for there to be that degree of difference in rank that is necessary for good order, not knowing enough about it for there to be any rogues or poor people, maintaining good order and works of public needs.... Having an elementary knowledge of those crafts that are adequate for men who still live in a state close to nature, working but little, enjoying all the pleasures of society, ... indeed of love, the only God to whom I believe these people offer any sacrifices.... This people possesses the gaiety of happiness ... Men have several wives and girls all the men they want. We have seen children enjoying equally the care of the father or the mother. This nation's customs are enhanced by the greatest cleanliness.... I do not know whether they know war with strangers.... All they need are the fruits which the soil liberally grants them without any cultivation, anything else, which would attract us, would bring upon them all the evils of the iron age. Farewell happy and wise people, may you always remain what you are. I shall never recall without a sense of delight the brief time I spent among you and, as long as I live, I shall celebrate the happy island of Cythera. It is the true Utopia.

Document 2

A common complaint among all European voyagers to Polynesia was the constant theft by the islanders of tools, weapons, scientific equipment, and anything else they could find. Captain James Cook found the constant pilfering especially irksome and endeavored to halt it any way he could. The following excerpt from his first encounter with Tahiti illustrates his aggravation. In the end, his efforts to recover a stolen ship's launch from the natives of Hawaii in 1779 cost him his life. (Source: Philip Edwards, ed., *The Journals of Captain Cook* [London: Penguin, 1999], 41.)

> Friday Apl. 14th [1769]. This morning we had a great many Canoes about the Ship, the Most of them came from the westward but brought nothing with them but a few Cocoa-nuts etc. Two that appear'd to be Chiefs we had on board together with

> several others for it was a hard matter to keep them out of the Ship as they clime like Munkeys, but it was still harder to keep them from Stealing but every thing that came within their reach, in this they are prodiges [prodigious] expert. I made each of the two Chiefs a present of a Hatchet things that they seem'd mostly to Value. As soon as we had partly got clear of these people, I took two Boats and went to the Westward all the Gentlemen being along with me, my design was to see if there was not a more comm[o]dious Harbour. . . . [At] the first place we landed . . . the Natives Flock'd about us in great Numbers and in as friendly a Manner as we could wish, only that they shew'd a great inclination to pick our pockets. . . . Dr. Solander [a naturalist] and Dr. Munkhouse [the ship's surgeon] had each of them their pockets pick'd the one of his spy glass and the other of his snuff Box, as soon as Lycurgus [a chief] was made acquainted with the theft he dispers'd the people in a Moment. . . . ; he seem'd very much concern'd for what had happend [*sic*] and by way of recompence offer'd of any thing that was in his House, but we refuse'd to except [*sic*] of any thing and made signs to him that we only wanted the [stolen] things [back] again.

Document 3

Captain Cook was always interested in the native cultures he encountered, which he described in detail and with much sensitivity. In the following excerpt, he gives an account of his first luau on Tahiti in 1769 and in particular of the preparation of the food that was eaten in typically Polynesian style. (Source: Philip Edwards, ed., *The Journals of Captain Cook* [London: Penguin, 1999], 59–60.)

> [A Tahitian woman named Obarea brought the English officers presents of food] which Consisted of a Hog a Dog Some Bread fruit & Plantains. We refused to except [*sic*] of the Dog as being an animal we had no use for, at which she seem'd a little surprised and told us that it was very good eating and we very soon had an opportunity to find that it was so, for . . . [the dog was] immediatly dress'd by some of the Natives in the following manner. They first make a hole in the ground about a foot deep in which they made a fire and heated some small Stones, while this was doing the Dog was Strangle'd and the hair got off by laying him frequently upon the fire, and as clean as if it had been scalded off with hot water, his intrails were taken out and the whole washed clean, and as soon as the stones and hole was sufficiently heated, the fire was put out, and part of the Stones were left in the bottom of the hole, upon these stones were laid Green leaves and upon them the Dog together with the entrails. These were likwise cover'd with leaves and over them hot stones, and

> then the whole [*sic*] was close cover'd with mould [earth]; after he had laid here about 4 hours, the Oven (for so I must call it) was open'd and the Dog taken out whole and done, and it was the opinion of every one who taisted of it that they Never eat sweeter meat, we therefore resolved for the future not to despise Dogs flesh. It is in this manner that the Natives dress, or Bake all their Victuals that require it, Flesh, Fish and fruit.

Document 4

Unlike Bougainville, who viewed the Tahitians as Noble Savages living in an idyllic state of Nature, James Cook described them as they actually were, but with great sensitivity. And although he found much to criticize in Polynesian culture, he also found much to praise. This makes his lamentations in 1773 during his second voyage all the more poignant about the ill effects produced by repeated native contact with Europeans, which he already saw was corrupting Tahitian society. Of particular concern was the collapse of native virtue and the consequent spread of venereal disease (first introduced by Bougainville's crew), as the Tahitians' relaxed view of sexual relations, which was altogether different from European ideas of morality, at first delighted English and French sailors who visited the island, but led to a loss of Tahitian innocence in very few years' time to Cook's deep regret. (Source: Phillip Edwards, ed., *The Journals of Captain Cook* [London: Penguin, 1999], 276–277.)

> During our short stay in [Queen Charlotte's] Sound I have observed that this Second Visit of ours hath not mended the morals of the Natives of either Sex, the Women of this Country I always looked upon to be more chaste than the generality of Indian Women, whatever favours a few of them might have granted to the crew of the *Endeavour* [on his first voyage] it was generally done in a private manner and without the men seeming to interest themselves in it, but now we find the men are the chief promoters of this Vice, and for a spike nail or any other thing they value will oblige their Wives and Daughters to prostitute themselves whether they will or no and that not with the privicy decency seems to require, such are the concequences of a commerce with Europeans and what is still more to our Shame civilized Christians, we debauch their Morals already too prone to vice and we interduce [introduce] among them wants and perhaps diseases which they never before knew and which serves only to disturb that happy tranquility they and their fore Fathers had injoy'd. If any one denies the truth of this assertion let him tell me what the Natives of the whole extent of America have gained by the commerce they have had with Europeans.

Glossary of Selected Terms

Archipelago. Can refer to a sea with many islands, such as the Aegean Sea near Greece, or to any group or chain of islands.

Austral. Used rarely, this term relates to the south; hence, Terra Australis, Australasia, and Australia.

Bight. A large shallow indentation in the coastline, such as the Great Australian Bight, which is different from a bay, defined as a gradual indentation of the sea into a coastline (e.g., Hudson Bay, the Bay of Bengal).

Cape. A point of land that juts out sharply seaward; hence, the Cape of Good Hope (at the southern tip of Africa) and Cape Horn (at the southern tip of South America).

Caravel. A small, light, reasonably fast sailing vessel capable of transoceanic travel. Developed by the Portuguese and Spaniards during the fifteenth and early sixteenth centuries, caravels were used by mariners such as Bartolomeu Dias, Vasco da Gama, and Christopher Columbus in their explorations.

Cartography. The science and art of making maps and charts both for land and sea; hence, "cartographer," one who draws such charts and maps.

Chart. A map of the sea and adjacent land for the use of navigators at sea, providing such details as are necessary for safe navigation; especially the outline of coasts, landmarks, and seamarks, and soundings for depth, tides, and currents.

Chronometer. A very accurate timepiece, with a nearly constant rate, that was specially adapted and mounted for maritime use aboard ships. Invented by John Harrison in 1761, a chronometer suitable for service at sea was not developed until 1766.

Coast. The meeting of land and sea, which is considered to be the boundary of the land at its shoreline.

Collier. A coal ship, the size of a bark and stoutly built, with a distinctive shape and a large hold for cargo. HMS *Endeavour*, Cook's vessel on his first voyage, was a collier specially refitted with square-rigging on all

its masts for his expedition to the Pacific. It was well suited for the purposes for which it was intended.

Commission. A grant of royal authority to hold military or naval rank and take command, signed by the monarch and awarded to an officer; in the United States, a commission is issued by Congress.

Dead Reckoning. Before the advent of reliable navigational instruments, mariners such as Christopher Columbus plotted a ship's geographic location in the open sea from the last fixed or observed position and based solely on the distance sailed along a course as steered by the compass.

Estado da India. State of India, the term used by the Portuguese during the late fifteenth through the seventeenth centuries for their settlements, factories, and colonies in the Indian Ocean basin from East Africa to the South China Sea and administered from the port of Goa.

Factory. An overseas trading post or station, often fortified against attack. Generally located along the east and west coasts of Africa, in India, and in Indonesia, the word derives from *feitoria*, first coined by the Portuguese.

Flora and Fauna. Refers to the plant life (flora) and animal life (fauna) of a region.

Frigate. A full-rigged ship of war, mounting cannons on a single gundeck, as well as on the forecastle and poop deck. Fast, maneuverable, and smaller than a ship of the line (or battleship of two or three gun decks), these vessels were used usually for scouting, signaling, and so on, as adjuncts to a battle fleet. Occasionally used for exploration, such as Bougainville's circumnavigation of the globe, they were ill suited to the task.

Galleon. A large, well-armed sailing vessel, developed in sixteenth-century Europe and used in most naval forces, but especially those of Spain. A specialized vessel, stoutly constructed and relatively maneuverable, it was ideal for transoceanic sailing in the Atlantic and Pacific (e.g., the Manila galleon). It was also the forerunner of the ship of the line warships developed in the seventeenth century.

Gulf. Refers to a large expanse of sea that is partly enclosed by land, such as the Gulf of Mexico.

Isthmus. A narrow neck of land that connects two larger territories or continents (e.g., the Isthmus of Panama, which links Central and South America).

Landfall. Refers to the first sighting of land after an ocean crossing.

Latitude. Defined as the measure of angular distance in degrees, minutes, and seconds of an arc from 0° to 90° north or south of the equator, but running parallel to it.

Logbook. A chronological record of events during a voyage that is kept by the ship's captain and includes such details as navigational data (e.g., the ship's speed, geographic position, wind direction, and weather

conditions), as well as observations about land, people, and so on, encountered. The captain's log also records his praise for, or displeasure with, the conduct of individual seamen.

Longitude. The angular distance between the prime meridian at Greenwich, England, and the meridian of the observer. Longitude is measured in degrees, minutes, and seconds (for greater accuracy) along the equator and is designated either east or west according to whether the observer is east or west of Greenwich. Meridian is defined as a semi–great circle joining the poles (and thus perpendicular to the equator) passing though any given position. The meridians, which are 15° apart at the equator but taper toward both poles, also indicate the twenty-four time zones of the globe.

Melanesia. One of three divisions of Oceania, comprising the island groups northeast of Australia, notably the Louisiades, the Solomons, the Santa Cruz chain, the Loyalty Islands, New Caledonia, and the Fijian Islands.

Micronesia. One of the three division of Oceania, comprising various small islands located northeast of Australia, but northwest of Melanesia, including the Mariana, Carolina, Pelew, Marshall, and Gilbert groups.

Monsoon. Seasonal winds that blow over the Indian Ocean, South China Sea, and adjacent waters. According to the rhythm of the monsoons, which shift direction with remarkable regularity and thus determine when it is possible to sail west or east in maritime Asia, the Northeast monsoon blows from September/October to April in the China seas, and November to March in the Indian Ocean. The Southwest monsoons blow from May to August/September in the China seas, and from May to September in the Indian Ocean.

Oceania. Refers to the islands and island groups of the entire South Pacific and adjacent seas, divided into three major zones: Melanesia, Micronesia, and Polynesia.

Peninsula. A piece of land, either large or small, that is almost surrounded by water and projects far into the sea (e.g., Cape York Peninsula in northern Australia).

Polynesia. One of three divisions of Oceania, comprising the major island groups due east of Australia, including the Hawaiian chain, Tahiti, the Tuamotus, the Tongas, and New Zealand.

Privateer. A privately owned vessel, other than a naval warship, whose owners have been granted a commission to use the craft as a ship of war in order to attack and capture the vessels or coastal settlements of an enemy state in wartime. Also a sailor on such a ship.

Reconquista. The reconquest of the Iberian Peninsula from Moorish or Islamic rule by the Christian forces of the eventual monarchs of Portugal, Castile, and Aragon.

Strait. A narrow passage of water between two landmasses, whether continents or islands, that connects two seas or large bodies of water (e.g., Strait of Magellan, Strait of Malacca).

Trade Winds. Almost permanent, steady winds broadly within the Tropics, which blow from the northeast in the northern hemisphere and from the southeast in the southern hemisphere, in the lower latitudes. They are caused by the normal flow of air from the poles toward the sun-heated equator, where they are deflected by the rotation of the earth. Because they were important for maritime commerce during the age of sail, they were given the name trade winds.

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These are Web sites for the Batavia Virtual Museum in both Dutch and English, which include links to a virtual factory, a virtual tour of the Dutch East India Company headquarters at Batavia on the island of Java, and so on.

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This is a guide to maritime museums around the world, arranged by continent, to facilitate research in maritime history on line.

Films

The Bounty, 1984, directed by Roger Donaldson, starring Anthony Hopkins as Captain Bligh and Mel Gibson as Fletcher Christian. Although this film focuses on the famous mutiny in 1789, the representation of

voyages to the Pacific during the age of sail and the re-creation of Polynesian culture on Tahiti are both faithful to history and dramatic.

Captain James Cook, 1987, directed by Lawrence Gordon Clark, starring Keith Michell. This made-for-television miniseries in four episodes is an excellent dramatization of the life and voyages of the great Pacific explorer. It is historically accurate with a strong cast and a faithful re-creation of events, though some dramatic license is taken to compress the story for television.

Christopher Columbus, 1948, directed by David MacDonald, starring Fredric March. This is a classic production that gives a step-by-step biography of the fifteenth-century explorer, his discovery of the New World, the fame that first greeted him, and his last days. Columbus is presented as a hero and a man ahead of his times, and although the movie takes some poetic license, especially by repeating some of the fabrications invented by Washington Irving, it is far more accurate historically than either of the films produced in 1992: *Christopher Columbus: The Discovery*, which is so inept as to be laughable, and *1492: Conquest of Paradise*, which strives painfully for political correctness but succeeds only in distorting the historical record beyond recognition.

Into the Rising Sun: Vasco da Gama and the Search for a Sea Route to the East, 1997, directed by Luc Cuyvers. This made-for-television documentary marked the five hundredth anniversary of Da Gama's voyage to India. It places the event within historical context, and much of the documentary was also filmed on location in India and the Spice Islands.

INDEX

Acapulco, 86, 91, 92, 93, 131, 158, 159
Afonso V Aviz, king of Portugal (r. 1438–1481), 16, 19, 36, 139
Africa, 1, 2, 7, 34, 35, 87, 89, 96, 106, 107, 111, 115, 116, 117, 124, 130, 138, 139, 149, 153, 154, 156, 160
Ailly, Pierre d', cardinal (1350–1420), 39
Albuquerque, Afonso de, second viceroy of Portugal's seaborne empire in Asia (1453–1515), 25, 26, 29, 34, 61, 139
Alcaçovas-Toledo, Treaty of, 37, 45
Alexander VI Borgia, Pope (r. 1492–1503), 45, 149
Almeida, Francisco de, first viceroy of Portugal's seaborne empire in Asia (ca. 1450–1510), 25–26, 29, 61, 139
Anghiera, Pietro Martire d' (ca. 1457–1526), 34, 57, 58, 59, 62, 119–120, 122, 155
Anson, George, commodore (1698–1762), 102–103
Antarctic Circle, 51, 111, 134, 148, 149, 150, 152, 154; and Antarctica, 106, 111, 123
Antilles, Greater and Lesser. *See* West Indies
Antipodes. See *Terra Australis Incognita*
Arab navigators, xiv–xv
Aragon, 36–37
Arctic Ocean, 55, 68, 72, 80, 82, 86, 95, 104, 148, 149, 150, 155; and Arctic Circle, 69, 74, 76, 80, 81, 104; and Kara Strait, 75, 76; and the Kara Sea, 75; and Novaya Zemlya, 74, 75, 76
Arteaga, Ignacio de (fl. late 1700s), 112
Asia, 49, 55, 60, 61, 64, 67, 69, 72, 75, 77, 86, 87, 89, 90, 95, 97, 98, 111, 115, 116, 117, 121, 124, 129, 130, 138, 139, 142, 150, 151, 152, 153, 155, 156, 160; geographic cohesiveness of, 2, 22, 26, 30
Atlantic Islands, 29, 40; and the Azores, 10, 15, 19, 21, 38, 40, 44, 46; and the Canaries, 10, 15, 37, 39, 40, 43; and the Madeiras, 10, 13, 19, 38
Atlantic Ocean, 4, 5–6, 10, 16, 35, 39, 49, 52, 55, 56, 58, 60, 74, 78, 86, 89, 94, 96, 101, 103, 106, 107, 108, 113, 115, 121, 126, 133, 147, 151, 153, 157
Australia, 92, 96, 97, 99, 100, 101, 106, 107, 108, 113, 115, 131,

Australia (*continued*)
151–160; and Botany Bay, 110, 112; and Cape Keer-Weer, 96; and Cape Leeuwin, 97, 99; and Cape York Peninsula, 96, 97, 99, 100, 110; and the Great Australian Bight, 97, 99; and the Great Barrier Reef, 110; and the Gulf of Carpentaria, 100, 132; and Tasmania (Anthony van Diemen's Land), 97, 99, 100, 112, 132
Austrian Succession, War of (1740–1746), 103
Ayllón, Lucas Vásquez (ca. 1475–1526), 66
Azurara, Gomes Eannes de (ca. 1410–1474), 12, 13

Baffin, William (ca. 1584–1622), 81; and Baffin Island, 77, 79, 81
Balboa, Vasco Nuñez (1475–1519), 57–58, 59, 60, 86, 119, 155–156; and the colony of Santa Maria de la Antigua del Darién, 57, 156
Barbosa, Duarte (?–1521), 26
Barents, William (?–1597), 75–76, 80; and the Barents Sea, 74, 76
Bastidas, Rodrigo de (1460–1526), 57
Bering, Vitus (1681–1741), 66, 101, 103–104, 105; and the Bering Sea, 104, 113; and the Bering Strait, 110, 111; and his orders, 161–162
Bodega y Quadra, Juan Francisco de la (1743–1794), 112, 113
Borough, Stephen (1525–1584), 75, 122
Bougainville, Louis-Antoine, comte de (1729–1811), 85, 108–109, 112, 113, 120–121, 162, 165
Bouvet de Lozier, Pierre (1705–1786), 106
Brosses, Charles de (1709–1777), 106
Button, Sir Thomas (fl. early 1600s), 81
Bylot, Robert (fl. early 1600s), 81
Byron, John (1723–1786), 107

Cabot, John (Giovanni Caboto, ca. 1450–ca. 1498), 49–50, 51, 55, 66, 69, 72, 78, 121, 133, 151–152
Cabot, Sebastian (ca. 1476–1557), 66–67, 69, 73, 78, 121–122, 133
Cabral, Pedro Alvares (ca. 1467–ca. 1520), 25, 26, 34, 50, 134; Muslim opposition to, in Asia, 25
Canada, 50, 68, 71, 81, 105, 120, 122, 150; and British Columbia, 111, 112, 113; exploration of the interior of, 116; and the Gulf of St. Lawrence, 70, 71, 133; and Labrador, 50, 69, 71, 77, 78, 79, 121; and Nootka Sound (Vancouver Island), 112, 113; and Nova Scotia, 49, 69, 133; and St. Lawrence River, 71, 122
Cape Horn, 89, 98, 101, 103, 106, 107, 110, 111, 113
Cape of Good Hope, 9, 20, 21, 23, 25, 27, 40, 50, 65, 72, 73, 87, 89, 94, 95, 96, 101, 106, 107, 108, 110, 123, 124, 154
Cape Verde, 17, 18; and the Cape Verde Islands, 17, 21, 40, 46, 150
Caribbean Sea, 5, 35, 55, 59, 67, 93, 105, 133, 134
Carteret, Philip (1733–1796), 108, 109
Cartier, Jacques (1491–1557), 70–71, 72, 150, 151

Castile, 36–37, 58, 62
Cathay. *See* China
Catholic Church, 3, 4
Cavendish, Thomas (1560–1593), 80, 95
Central America, 7, 47, 59, 60, 68, 86, 91, 134; and Costa Rica, 57; and Darién (Gulf of), 57, 60, 62, 120, 152; and Honduras, 57; and the Isthmus of Panama, 48, 57, 58, 60, 61, 101, 132, 133; and the Yucatan Peninsula, 60
Ceuta, 12, 13
Chancellor, Richard (?–1556), 74–75, 122
Charles V Habsburg, Holy Roman Emperor (r. 1517/19–1555/56), 36, 60, 63, 72, 91, 122, 150
China: first contacts with the Portuguese, 26; Ming dynasty of, 2–3, 22; navigators, xiv–xv; Portuguese factory at Macau, 28, 30; quest for, 5, 7, 11, 21–22, 26, 29, 39, 43, 44, 45, 50, 51, 61, 65, 74, 76, 77, 78, 79, 90, 91, 93, 99, 104, 121, 128, 129, 151, 155; and trade monopoly with Japan, 29; and war with Great Britain (1839–1842), 116
Cipangu. *See* Japan
Classical authority (ancient Greek and Roman), xv, 7, 41, 65, 66, 77, 87, 162; and Pliny the Elder, 77; and Ptolemy, 39, 66, 87, 126, 130–131; and Pythagoras, 65
Collander, John (?–1789), 107
Columbus, Bartolomeu, brother of Christopher (1461–1514/15), 47, 56; and the colony of Santo Domingo, 47
Columbus, Christopher (1451–1506), xiv, 10, 21, 34, 36, 37, 51, 55, 56, 58, 61, 65, 69, 89, 90, 119, 120, 121, 124, 129, 130, 131, 133, 142–147, 151; appraisal of, by Washington Irving, 41; and the colony of La Isabella, 47, 56; and the colony of La Navidad, 44, 47; at the court of Portugal, 40; at the court of Spain, 40–43, 146; death of, 48, 49; demands of, for reward, 42, 143–144; and duchy of Veragua, 48, 57; first voyage of, 43–44, 134, 144–145; fourth voyage of, 47, 57; geographic speculations of, 38–40; his description of his discoveries, 43–44, 45, 144–145; and his Enterprise of the Indies, 38–40, 41, 42, 44, 142, 146; and Paolo Toscanelli, 39; personal background of, 38, 48; religious views of, 48–49, 145–146; second voyage of, 46–47; third voyage of, 9, 47, 135
Columbus, Ferdinand, natural son of Christopher (1488–1539), 38, 40, 44
Conquistadores, 52, 57, 60
Constantinople, 3, 4, 6, 10
Cook, Captain James (1728–1779), 85, 88–89, 108, 109–111, 112, 113, 122–123, 162, 163, 164, 165; and Cook Strait (New Zealand), 99, 110; and the Cook Islands, 92; death of, 111, 123, 163; first voyage of, 109–110; second voyage of, 110; third voyage of, 110–111, 112, 113
Coronado, Francisco Vasquez de (ca. 1510–1554), 116
Correa, Gaspar (fl. early 1500s), 22, 23, 24, 139, 140
Corte-Real, Gaspar (ca. 1450–ca. 1501), 50, 51, 55, 133

Cortés, Hernán (1485–1547), 52, 60–61, 63, 66, 91, 119, 120
Cosa, Juan de la (ca. 1460–1510), 51, 57, 134
Crusades, 5, 16, 18

Dalrymple, Alexander (1734–1808), 107, 109, 111
Dampier, William (ca. 1652–1715), 101–102, 106, 158, 159, 160, 161; and Alexander Selkirk, 102, 160–161; and Dampier Strait, 101; and his publications, 101, 102
Davis, John (ca. 1550–1605), 79–80, 81
Del Cano, Juan Sebastian (ca. 1487–1526), 65, 90, 91
Demarcation of the globe, 45–46, 50, 67, 124, 134, 149–150; and Conference of Badájoz (1523–1524), 66; and Treaty of Zaragoza (1529), 67. *See also* Tordesillas, Treaty of
Dias, Bartolomeu (1450–1500), 20–21, 22, 23, 40, 87, 123
Diemen, Anthony van, Dutch Governor-General of Batavia (?–1645), 99, 100, 132
Drake, Francis (ca. 1540–1596), 85, 93–95, 97, 107, 127, 156–158; and New Albion (California), 94, 107, 158
Dutch Netherlands. *See* United Provinces

East Africa, 22, 25, 26, 27, 28, 29, 86; and Kilwa, 25; and Malindi, 2, 5, 23, 124; and Mogadishu, 2; and Mombasa, 23, 28; and Mozambique, 23, 26, 30, 124; and Socotra (Indian Ocean), 26
East Indies, 27, 34, 49, 56, 61, 95, 102, 108, 131, 132, 146, 159
Elizabeth I Tudor, queen of England (r. 1558–1601), 73, 77, 93, 158
England, 3, 4, 49, 67, 85, 86, 89, 90, 94, 95, 101, 102, 121, 122, 126, 139; and Anglo-Spanish rivalry, 67, 93, 94, 95, 102, 127, 158; and the Cathay Company (est. 1577), 77; and the Company of Merchant Adventurers, 73, 74, 122; and the English East India Company (est. 1600), 80, 95, 107, 126; exploration as national enterprise, 101, 121; motives for voyages of exploration, 72, 73–74, 78, 79, 93, 94, 95, 107; and the Muscovy Company (est. 1555), 74, 122; and national pride, 73, 125; and the Northwest Company (est. 1584), 79; seaborne empire of, xiv, 8, 115; and the South Sea Company (est. 1711), 102.*See also* Great Britain
Entrecasteaux, Bruni d' (1737–1793), 112
Exploration, Age of, historical treatments, xiii–xv

Factory (*feitoria*), 16, 21, 26, 28, 30, 62, 124; at Colombo (Ceylon), 28; at Macau (China), 28, 30; and Mombassa (East Africa), 28; at Mozambique, 26, 30; at São Jorge de Mina (West Africa), 16, 38; at Soffala, 26, 124; at Ternate (Moluccas Islands), 28
Falkland Islands, 80, 103, 107, 120
Fenton, Edward (?–1603), 95
Ferdinand II, king of Aragon (r. 1479–1516), 9, 36, 37, 41, 42, 43, 44, 45, 47, 49, 121, 122, 142, 143, 145, 147, 149, 150

Fernandez, João (fl. early 1500s), 50
Fountain of youth, 59
Foxe, Luke (1586–ca. 1635), 81–82
France, 3, 49, 67, 85–86, 89, 90, 95, 101, 102, 104, 106, 112, 121, 125, 133, 139; and Anglo-French rivalry (Pacific), 104–105, 107, 109, 120, 123; motives for voyages of exploration, 70, 71, 72, 108, 117, 133; seaborne empire of, xiv, 8, 105, 115, 120
Francis I Valois, king of France (r. 1515–1547), 70, 133, 151
French Revolution (1789–1799), 115, 116, 121
Frobisher, Sir Martin (ca. 1535–1594), 77–78, 80, 93, 155

Galapagos Islands, 91
Gama, Vasco da (ca. 1460–1524), 9, 21, 22–24, 25, 26, 27, 34, 48, 87, 123–124, 138, 139, 140–141; death of, 124; in India, 24–25, 124; Muslim opposition to, in East Africa, 23, 124; second voyage of, 25
Geography and geographic knowledge: of Africa, 17; of Asia, 60, 129; of Australia, 97, 99, 100, 159–160; development of, xiv, xv, 14, 20, 41, 50, 55, 65–66, 77, 82, 90, 94, 105, 155, 157; of the globe, 86, 87, 89, 115, 148–149; ideas of Cardinal Pierre d'Ailly, 39; ideas of Christopher Columbus, 38–40; ideas of Gerardus Mercator, 128; ideas of Paolo Toscanelli, 39; ideas of Pietro Martire d'Anghiera, 58, 62–63, 120; ideas of Ptolemy, 130–131; ideas of Richard Hakluyt, 124–125; of the New World, 51, 58, 62–63, 69, 70, 133–134, 153–154, 162; of the Pacific, 65–66, 88, 102, 104, 109, 110, 112, 113, 123, 162; of *Terra Australis Incognita*, 106–107
Gilbert, Sir Humphrey (ca. 1539–1583), 76–77, 78–79, 154, 155
Gómara, Francisco López de (1512–1572), 34, 66
Gomes, Fernão (fl. 1470s), 19
Gomez, Estavão (ca. 1474–ca. 1538), 66
Granada, emirate of, 10, 36, 37, 42
Great Britain, 104, 116, 120; and Anglo-French rivalry (Pacific), 104–105, 107, 109, 120, 123; and Anglo-Spanish rivalry (Pacific), 112, 113; motives for voyages of exploration, 109, 113, 117, 123. *See also* England
Great Southern Continent. See *Terra Australis Incognita*
Greenland, 50, 77, 79, 81

Hakluyt, Richard (ca. 1552–1616), 73, 74, 75, 77, 78, 124–126
Harrison, John (1693–1776), 88, 126–127
Hawkins, Richard (1533–1595), 95
Henry VIII Tudor, king of England (r. 1509–1547), 69, 73, 121
Henry "the Navigator," Prince of Portugal (1394–1460), 12–14, 15, 16–17, 18, 19, 28, 29, 38, 48; death of, 19; his court at Sagres, 13–14; official policy for trade and exploration under, 17–18; and the Order of Christ, 13, 16, 17; and the route around Africa to India, 19
Henry VII Tudor, king of England (r. 1485–1509), 50, 121, 152
Hormuz, 22, 26, 129, 141–142

Hudson, Henry (ca. 1550–ca. 1610), 76, 80–81; and Hudson Bay, 69, 80–81, 107; and Hudson River, 70; and Hudson Strait, 69, 78, 79, 81

Imperialism, Age of, xiii, 69, 117
India, 7, 18, 22, 23, 34, 40, 46, 96, 104, 105, 107, 123, 129, 140; and Calicut, 21, 23, 25, 26, 61, 124, 140; and Cannanur, 25; and Cochin, 25, 124; and Diu, 27, 61; and Genoa, 7, 10, 13, 14, 38, 129; Malabar Coast of, 21, 26
Indian Ocean, 1, 5–6, 21, 25, 29, 30, 60, 65, 66, 87, 96, 99, 106, 120, 132; and the island of Mauritius, 96, 99, 120; and the island of Réunion, 120; and the island of Socotra, 26; and the monsoon winds, 2, 29, 96; naval power in, 21–22
Indonesia, 26, 27, 46, 61, 86, 96; and the Admiralty Islands, 108; and the island of Timor, 101
Industrial Revolution, the, 115, 116
Irving, Washington (1783–1859), 41
Isabella I, queen of Castile (r. 1474–1504), 9, 36, 37, 38, 41, 42, 43, 44, 45, 47, 49, 119, 122, 142, 143, 145, 147, 149, 150
Islam, 2, 4, 7, 10, 16, 18, 24
Italy, 62, 70, 119, 133; and Genoa, 7, 10, 13, 14, 38, 129; and Venice, 7, 128, 129
Ivan IV "the Terrible" Rurik, tsar of Russia (r. 1533–1584), 74

Jackman, Charles (fl. late 1500s), 75
James, Thomas (1593–1635), 81–82
Jansz, William (1570–?), 96–97
Japan, 22, 26, 29, 39, 43, 44, 45, 51, 79, 91, 99, 116, 132, 152, 162; first contacts with the Portuguese, 27; Portuguese trade monopoly with, 29
Java, island of, 2, 99, 100; and Bantam, 96; and Batavia, 96, 98, 99, 101, 103, 108, 110, 112, 132
Jefferson, Thomas, president of the United States (1801–1809), 114, 116
John I Aviz, king of Portugal (r. 1385–1433), 12
John II Aviz, king of Portugal (r. 1481–1495), 19–20, 40, 46, 139, 148, 149, 150; claims Columbus's discoveries for Portugal, 44, 45, 148
Juan Fernandez Islands, 91, 98, 102, 107, 108, 160

Kerguelan-Trémaric, Yves de (1734–1797), 106

La Pérouse, Jean de (1741–1788?), 111–112, 113
Legazpi, Miguel Lópex de (ca. 1510–1572), 91
Le Maire, Isaac (?–1624), 97; and Strait of Le Maire, 98, 103
Le Maire, Jacob (ca. 1565–1616), 98
Lewis and Clark Expedition (1803–1806), 112, 113–114
Longitude. *See* navigation
Louis XV Bourbon, king of France (1715–1774), 108; and the Louisiade Islands, 108
Loyasa, Garcia Jofre de (?–1528?), 90, 91

Magellan, Ferdinand (ca. 1480–1521), 34, 60, 61–66, 70, 85,

86, 87, 88, 89, 90, 92, 94, 119, 155, 157; and shipboard conditions during Pacific crossing, 64; and the Strait of Magellan, 61, 64, 66, 70, 72, 77, 80, 88, 89, 92, 94, 95, 96, 97, 98, 103, 108, 120, 122, 133, 154–155
Ma Huan (ca. 1380–ca. 1460), 2, 141, 142
Malacca, 2, 22, 26, 61, 96; Strait of, 24, 26, 96
Malaspina, Alejandro (ca. 1755–1810), 113, 115
Malaysia, navigators, 1
Manila Galleon. *See* Philippines Islands; Trade, networks of
Mansa Muhammad, king of Mali (1307?–1337?), 5
Manuel I Aviz, king of Portugal (r. 1495–1521), 22, 24, 27, 62
Mediterranean Sea, xiv, xv, 3, 6, 10–11, 12, 14, 24, 27, 29, 36, 52, 66, 82, 121
Melanesia, 1, 64, 86, 98; and Fiji Islands, 99, 132; and New Britain, 101, 108, 132; and New Caledonia, 111, 112; and the New Hebrides Islands, 92, 108, 111, 131; and the Santa Cruz Islands, 92, 108, 112, 128, 131
Mendaña, Alvaro de (ca. 1541–1595), 92, 108, 111, 112, 127–128, 131
Mercator, Gerardus, geographer and cartographer (1512–1594), 51, 125, 128
Mexico, 35, 60, 62, 63, 70, 72, 86, 91, 92, 101, 119, 131, 148, 157, 158; Aztec Empire of, 35, 52, 60, 68, 86; Gulf of, 59, 68
Micronesia, 86; and the island of Guam, 64, 101, 107, 113, 159; and the Marianas Islands, 64; and the Marshall Islands, 127; and the Solomon Islands, 92, 99, 108, 112, 127, 128, 131
Middle East, 2, 6–7, 10; and the Holy Land, 48
Moluccas Islands, 27, 28, 46, 59, 60, 61, 62, 64, 66, 67, 86, 94, 96, 97, 101, 103, 132, 154, 158; and Ternate, 61, 65, 94; and Tidore, 65
Mongol Empire, 6, 128, 129
Morison, Samuel Eliot (1887–1976), 48

National identity and exploration, 58, 63, 73, 78; and national rivalries, 67–68, 71, 72, 92, 93, 96, 97, 100–101, 115, 116–117, 150–151; and state sponsorship, 67, 68, 69, 85
Navigation, 1, 10, 15, 20–22, 25, 78, 82, 86, 90, 92, 94, 96, 97, 98, 108, 109, 122, 123, 124, 135; advances in, 7; ancient Greek and Roman, 3; in Asia, 29; in the Pacific, 88–89, 105–106; and the problem of longitude, 88, 90, 105, 121, 126, 130
Newfoundland, 49, 69, 70, 71, 78, 115, 121, 122, 133, 134; and the Grand Banks, 49, 72
New Guinea, 90, 91, 92, 98, 99, 100, 101, 103, 107, 108, 131, 132, 159, 160
New Holland. *See* Australia
New Spain. *See* Mexico
New World, 7, 9, 38, 44, 51, 52, 55, 56, 58, 59, 60, 67, 70, 71, 72, 78, 86, 89, 93, 94, 97, 115, 119, 122, 125, 133, 134, 135, 148, 150, 151, 153
New Zealand, 1, 99, 100, 110, 112, 113, 132
North Africa, 4, 10, 11–12, 37; and Morocco, 12, 14, 16, 21, 27, 62

North America, 5, 50, 52, 55, 69, 77, 79, 104, 113, 115, 121, 123, 128, 134, 162; and Alaska, 104, 111, 112, 113, 161; and California, 89, 92, 94, 107, 111, 112, 113, 127, 158, 159; and Florida, 59, 62, 66, 68, 70, 72, 78, 119, 133, 134; and Maine, 66, 70; and Oregon, 112, 113; and Washington (state of), 113
Northeast Passage, 74–77, 80, 95, 122, 155
Northwest Passage, quest for, 69, 70, 72, 73, 74, 77–82, 95, 107, 113, 154–155, 157, 158; and the mythic Strait of Anian, 77, 78, 90, 93, 110

Oceania, 6, 95
Ojeda, Afonso de (ca. 1465–1515), 51, 56, 119, 134
Old Testament authority: and Hiram of Tyre, 62; and King Solomon, 62, 87, 116, 127; and Orphir, 62, 87, 127; and Tarshish, 62, 127
Olid, Cristobal de (1492–1524), 60
Ovando, Frey Nicolás de (ca. 1451–1511), 56

Pacific Ocean, 5–6, 29, 58, 59, 60, 61, 64, 66, 70, 78, 80, 81, 82, 115, 119, 120, 127, 131, 132, 160; discovery of, 58, 155–156; islands of, 1; motives for exploration of, 85, 87; named, 64
Paulmyer, Binot (fl. early 1500s), 87, 88, 106; and Gonneville Land, 87, 106
Pereira, Duarte Pacheco (?–1533), 20
Pérez, Juan Josef (ca. 1725–1775), 112
Persian Gulf, 2, 22, 26
Peru, 35, 86, 91, 92, 98, 99, 127, 128, 131, 132, 148, 159; Inca Empire of, 35, 52, 57, 68, 86, 127
Pet, Arthur (fl. late 1500s), 75
Peter I "the Great" Romanov, tsar of Russia (r. 1689–1725), 103, 162
Philippines Islands, 61, 65, 67, 86, 89, 90, 91, 92, 94, 113, 131, 132, 158, 159; and the island of Cebu, 65, 91; and the Manila Galleon, 91, 93, 94, 131, 158–159
Philip II Habsburg, king of Spain (r. 1556–1598), 91, 95
Pigafetta, Antonio (1491–1535), 63, 64, 65
Pinzón, Martin Alonzo (1441–1493), 145
Pinzón, Vincent Yàñez (1460–ca. 1524), 56
Pizzaro, Francisco (1476–1541), 52, 57
Polo, Marco (1254–1324), 5, 6, 11, 34, 39, 48, 87, 124, 128–129
Polynesia, 1, 64, 86, 106; and Easter Island, 1, 103, 111; and the Hawaiian Islands, 1, 92, 111, 123, 163; and the Marquesas Islands, 92, 111, 127, 128; and the Samoa Islands, 92, 103, 107, 108, 112; and the Society Islands, 103; and Tahiti, 92, 108, 110, 123, 162–165; and the Tonga Islands, 98, 99; and the Tuamotu Islands, 103, 127, 131; voyages of exploration to, xv
Ponce de León, Juan (1460–1521), 59–60, 61
Portugal, 7, 10, 49, 89, 91, 123, 124, 131, 133, 142, 150, 151, 152, 153; administration of, 25,

27–30, 52; commercial focus of, in Asia, 22–23, 27, 140; conquests of, 26–27; and the country trade in maritime Asia, 28; European challenges to maritime empire, 30; exploration as national enterprise, 11, 12, 19, 28, 34, 37, 40, 138–139; first contact with China, 26; first contact with Japan, 27; geographic extent of, 28–29; and the Moluccas Islands, 27, 28; motives for and advantages in voyages of exploration, 10–12, 13, 15, 22, 24, 25, 29; naval power of, 22, 25, 26, 28, 29, 34; and navigation, 6, 10; and the North Atlantic, 50; official policy toward trade and exploration of, 17–18; papal and royal edicts in support of, 16, 18–19; *reconquista* of, 10; rivalry of, with Spain, 86, 147, 149; seaborne empire of, xiv, 8, 27, 30, 45, 46, 124; and trade from Asia to Europe, 30; and trade monopoly between China and Japan, 29; united with Spain (1580), 95; voyages of exploration, xiii, 5, 9, 35, 73; war with Castile and Aragon, 36; in West Africa, 27
Prester John, mythic Christian king, 11
Privateers, 85, 93, 94, 101, 102; and Alexander Selkirk (1676–1721), 160–161; and Woodes Rogers (ca. 1679–1732), 102, 160
Ptolemy, Claudius (ca. 90–ca. 168), 39, 66, 126, 128, 129–131

Quiros, Pedro Fernandez (1565–1615), 92, 103, 108, 127, 128, 131–132

Red Sea, 2, 26, 28, 29; and the port of Aden, 26
Reformation, the, 93
Roggeveen, Jacob (1659–1729), 101, 103, 106
Russia, 56, 74, 75, 76, 85–86, 112, 122; and Archangel, 74, 75; exploration as state enterprise, 103, 104; and Kamchatka (river and peninsula), 103, 104, 112, 162; and motives for voyages of exploration, 104, 117; and the Ob River, 75, 162; and Siberia, 103, 104, 116, 162
Ryuku Islands, 62

Saavedra, Alvaro de (?–1529), 91
Sahara Desert, 11, 12, 14, 16, 17, 18
Santángal, Luis de (?–1505), 43
Schouten, Jan (?–ca. 1616), 98
Schouten, Willem (ca. 1567–1625), 97; and Schouten Islands, 98
Science and exploration, 85, 102, 105, 109, 117, 120; and Daniel Solander, botanist (1733–1782), 109, 110, 164; in the Pacific, 108, 110, 112, 113; and the Royal Society of London (for the Promotion of Natural Knowledge), 109, 110, 111, 123, 126, 127; and Sir Joseph Banks, naturalist (1743–1820), 109, 110; and the Transit of Venus (1769), 109, 110, 123
Scurvy, 64, 76, 81, 88, 98, 99, 104, 106, 110, 111, 112, 128, 132
Seven Years' War (1756–1763), 101, 104, 120, 122
Ships and shipping, 7, 88; *Cygnet* and *Roebuck* (Dampier), 101; *Eendracht* (Le Maire and Schouten), 98; *Golden Hinde*

Ships and shipping (*continued*) (Drake), 94, 95, 156; HMS *Dolphin* (Byron and Wallis), 107; HMS *Endeavour* (Cook), 109, 110, 123, 165; HMS *Swallow* (Carteret), 108; *La Boudeuse* (Bougainville), 108; *Santa Maria*, *Pinta,* and *Niña* (Columbus), 43, 44, 56, 144, 145; *Victoria* (Magellan), 65, 66, 85
Silk Road, 2, 75, 116
Slave trade, 15, 16, 17, 21
Smith, Adam (1723–1790), 34
South America, 1, 5, 51, 52, 64, 67, 68, 86, 94, 97, 98, 101, 102, 113, 115, 128, 132, 134, 135, 152, 154; and the Amazon River, 51, 134; and Argentina, 63; and Brazil, 25, 27, 29, 46, 50, 51, 56, 63, 133, 134, 152; and Chile, 91, 94, 99, 127; and Colombia, 57; and Ecuador, 91; and Guiana, 56; and Patagonia (Argentina), 63, 64, 98, 120; and Rio de Janeiro, 51; and Rio de la Plata, 51, 63, 66, 122; and Venezuela, 56, 134
Southeast Asia, 7
Southland. *See* Australia
South Sea. *See* Pacific Ocean
Spain, 3, 4, 7, 49, 86, 89, 101, 102, 119, 121, 122, 127, 131, 133, 134, 150, 151, 152; administration of, 56; and Anglo-Spanish rivalry, 67, 93, 94, 95, 102, 112, 113, 127, 158; and the Armada (1588), 80, 125; exploration as national enterprise, 43, 121; and law of the "closed seas," 89, 112, 156; motives for voyages of exploration, 57, 58–60, 61, 66, 69, 113; and navigation, 10; *reconquista* of, 36, 37; rivalry of, with Portugal, 86, 147, 149; seaborne empire of, xiv, 8, 115; voyages of exploration, 34, 35, 73, 119; war with Portugal, 36
Spice Islands. *See* Moluccas Islands
Sri Lanka (Ceylon), 27, 28, 87, 96, 138
Strait, search for, through the Americas, 55, 56, 58, 59, 60, 62, 63, 66, 69, 122. *See also* Northwest Passage

Taiwan (Formosa), 62, 132
Tasman, Abel Janszoon (ca. 1603–1659), 99–100, 103, 107, 132–133
Terra Australis Incognita, 87, 88, 91, 92, 94, 97, 98, 100, 101, 103, 104–105, 106–107, 108, 109, 110, 120, 123, 127, 131, 132, 157, 159–160; and the legend disproved, 111, 123
Tierra del Fuego, 64, 88, 94, 97, 98, 120, 154, 157
Tordesillas, Treaty of (1494), 46, 50, 62, 124, 134, 147, 149–150. *See also* Demarcation of the globe
Torres, Luis Vaez de (?–1613?), 92, 96, 107, 131; and the Torres Strait, 92, 96, 107, 110, 131
Trade, networks of, 2, 5–6, 8, 10, 14, 17, 18, 19, 21, 27, 29, 30, 34, 38, 67–68, 95, 104, 115, 141–142; and commercial goods, 5, 7–8, 10–11, 15, 16, 17–18, 22, 23, 29, 45, 49, 60, 67–68, 92, 93, 133, 140, 142, 159; and the country trade in maritime Asia, 28; and the global economy, 6; Muslim domination of, in Asia, 24–25, 28, 29; and Pacific trade routes (and the Manila Galleon), 91, 93, 94, 95, 131, 158–159

United Provinces, 67, 85–86, 89, 90, 97, 101, 102, 132; and Batavia (Java), 96, 98, 99, 132; and the Dutch East India Company (est. 1602), 80, 95, 96, 97, 98, 99, 100, 103, 116, 132; and the Dutch Revolt from Spanish rule (1566–1648), 93, 95, 96; and the Dutch West India Company (est. 1621), 103; exploration as national enterprise, 95–96; exploration of Australia, 97, 99; motives for and advantages in voyages of exploration, 95, 96, 97, 98, 99, 100, 103, 117, 132; seaborne empire of, xiv, 8

Vancouver, George (1757–1798), 113, 115
Verrazano, Giovanni da (1485–1528), 70, 133–134
Vespucci, Amerigo (1451–1512), 50–51, 56, 62, 63, 69, 122, 134–135, 152–154; death of, 135
Vikings, xiv–xv, 4–5, 50
Villalobos, Ruy López de (1500–1544), 91
Vivaldi, the brothers, 10

Waldseemüller, Martin, cartographer (ca. 1470–ca. 1522), 51, 69, 135
Wallis, Samuel (1728–1795), 107–108, 109
West Africa, 5, 9, 18, 20, 27, 73; and Cape Blanco, 15; and Cape Bojador, 13, 14, 15, 16, 21, 89; and Cape Juby, 14, 15, 21; and Cape Palmas, 18; and the Gold Coast, 19, 21; and Guinea, 13, 15, 16, 17, 19, 36, 38, 40, 149, 160; and the Gulf of Guinea, 19, 21; and the Niger River Delta, 12, 13, 21; and the River of Gold, 13, 15; and São Tomé, 19, 21; and the Senegal River, 13, 16, 17; and Sierra Leon, 18
West Indies, 5, 34, 49, 52, 55, 56, 59, 67, 68, 101, 147, 148, 151, 154, 155; and the Arawak Indians, 5; and the Bahamas Islands, 43, 61, 66, 133; and the Carib Indians, 5; and Cuba, 44, 45, 57, 58, 59, 72, 119; discoveries in, 43–44, 47; and Hispaniola (Haiti), 9, 44, 47, 56, 57, 119; and Jamaica, 57, 126; and Puerto Rico, 59; and San Salvador Island, 43, 44; and the Taino Indians, 56
Weymouth, George (fl. early 1600s), 80
Willoughby, Sir Hugh (ca. 1500–1554), 74, 122, 155

Zheng He (1371–ca. 1434), voyages of, 2–3, 22, 141

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